

Refuges and Wildlife

Program Description and Mission



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The Refuges and Wildlife Program is responsible for the acquisition and management of lands within the National Wildlife Refuge System for the purpose of assuring the perpetuation of wildlife populations for the American public. Additionally, work is done with private landowners and organizations to enhance wildlife populations on private lands. The Regional Migratory Bird program is responsible for migratory bird management coordination and permitting activities and is part of the overall Refuges and Wildlife Program. The North American Waterfowl Management Plan staff seeks to protect, restore, and enhance wetland and grassland habitats essential to the achievement of the Plan's goals.

Summary of Fiscal Year 1998 Accomplishments

During Fiscal Year 1998, the Division of Refuge Operations conducted several Refuge Operations and Needs System (RONS) workshops to assist field stations in updating their RONS lists. Technical assistance was provided on the various Refuge management modules to obtain information for a regional report. Standard position descriptions were prepared for a variety of field positions. Planning for the Fiscal Year 1999 Regional Biologist Forum was undertaken. Refuge Operations became a member of the Minnesota WEED IMP Group in an effort to solve noxious weed problems on Service lands. The number of acres being impacted by weeds increased by 10,056 from Fiscal Year 1997. In an effort to stem that trend, 51 pesticide proposals were reviewed from 27 field stations, 3 were denied and 9 were submitted to Washington.

In the Waterfowl Production Area program in Iowa, Minnesota and Wisconsin, the Division of Realty completed 107 transactions protecting 5,940 acres in fee, 3,534 acres in wetland easements, and 874 acres of grassland easements at a cost of \$7,357,735. Of this total, four tracts covering 270 acres and with a cost of \$446,705 were acquired using North American Wetland Conservation Act funds. A total of 4,994 acres, with \$2,540,064 of Land and Water Conservation Fund (LWCF) monies in 30 transactions at 13 projects were completed. The LWCF total includes 3,019 acres acquired with \$822,700 in 4 projects using flood monies.

***Region 3 manages
54 National
Wildlife Refuges
and nine
Wetland
Management
Districts
with more than
240,000 acres in
waterfowl
production areas.***

Summary of Fiscal Year 1998 Accomplishments (continued)

In Fiscal Year 1998, the National Environmental Policy Act (NEPA) compliance work and decision documents were completed to establish Whittlesey Creek National Wildlife Refuge and the Northern Tallgrass Prairie Habitat Preservation Area. Comprehensive Conservation Plans were begun or significant work completed for seven National Wildlife Refuges. Planning to establish two new national wildlife refuges was begun or continued. Substantial progress was made toward completion of the Big Muddy NF&WR Expansion Environmental Impact Statement. An Internet site web page was established for Region 3 planning.

The Region's Nongame Bird Conservation program provided small grants to Service field stations and outside agencies and organizations to accomplish survey, research, and management activities. In Fiscal Year 1998, partners in these projects included the USGS Biological Resources Division, the U. S. Forest Service, USDA Wildlife Services, the Canadian Wildlife Service, universities, Cornell Laboratory of Ornithology, Kalamazoo Nature Center, Neville Public Museum, and Max McGraw Wildlife Foundation, and state agencies.

Partners for Fish and Wildlife

The Partners for Fish and Wildlife (Partners) program continued its long-term effort to restore wetland habitats and to assist in the goal of achieving no-net-loss. Roughly, 1,000 wetland sites totaling over 3,000 acres were restored throughout the Region. A comparable acreage of upland habitats, mostly native grasses and forbs, were also established this past year. Endangered species habitat and riparian restoration efforts are ongoing in Missouri, Wisconsin, Iowa, and Michigan. Despite our efforts to restore habitats, there is an alarming trend, particularly in the Prairie Pothole states, to convert existing wetlands for agricultural purposes. Due to changes in the 1996 Farm Bill, the technical assistance role of the Partners program has diminished, leaving the Service's only tool for addressing wetland conversions to Section 404 permit reviews.

All Partners for Fish and Wildlife projects are completed through voluntary participation by private landowners. Annually, there are over 300 landowners that partner with the program to improve habitats on private lands. In addition, financial assistance from conservation groups is used to reduce overall project costs and to leverage funds for additional projects.

Visitor and Information Management

The Visitor and Information Management section assists field stations with numerous non-biological activities and compiles data for Regionwide programs. In Fiscal Year 1998, eight National Wildlife Refuges reported recreation fee revenues totaling over \$330,000. Over 4,340 individuals volunteered 211,197 hours of work on 61 field stations. Twenty refuges in the Region currently are benefitting from the efforts of organized citizen support groups. Four new groups are in the early stages of organizing and incorporating, and they were especially assisted by a "Friends Workshop" held in Minneapolis.

Public Use

Public use of National Wildlife Refuges in Region 3 totaled 7.4 million visitors in Fiscal Year 1998. This total included 3.7 million visits for interpretation and wildlife observation, 600,000 hunters, and 1.1 million anglers. In addition, 124,000 students participated in staff or volunteer conducted environmental education programs on refuges, and 4,300 teachers took part in educational workshops on refuges.

North American Waterfowl Management Plan

The North American Waterfowl Management Plan (NAWMP) is implemented in Region 3 through the Prairie Pothole and Upper Mississippi River and Great Lakes Joint Ventures. During Fiscal Year 1998, 11 large grants and 4 small grants from the North American Wetlands Conservation Act were secured for project partners. Those funds were matched by over \$27 million in non-federal contributions. Collectively, this money was used to acquire 16,800 acres of land, to restore 11,100 acres, to enhance 4,300 acres and to create 320 acres of wetland and/or grassland habitat. Regional funds were also matched with partner funding to restore and/or enhance over 1,500 acres of wetland and 350 acres of grassland. A concerted effort was put forth in Fiscal Year 1998 to integrate waterfowl and nongame bird management. The Upper Mississippi River and Great Lakes Region Joint Venture Implementation Plan was updated to include a new duck recruitment objective, a new duck mid-migration objective, and a nongame bird objective.

A minimum of 10 state natural resource agencies, 5 federal agencies, 4 Native American tribes, 12 county agencies, 20 Service field offices, 7 nongovernment organizations, 3 companies/corporations, and countless private individuals partnered with NAWMP staff to protect or restore wetland/grassland habitats or to promote conservation messages benefitting the Service's trust resources.

Migratory Birds

The Division of Migratory Birds actively participated with the North American Waterfowl Management Plan staff in the integration of several nongame bird conservation initiatives with traditional waterfowl management projects. The Migratory Bird program provided nearly \$300,000 for 80 nongame bird projects, including 49 done on national wildlife refuges. Funding was also provided for research and management projects relating to Canada geese, duck habitat, woodcock, a shot ingestion study, and for wetland management. Migratory Birds played a major role in organizing a scientific symposium on the status and management of double-crested cormorants and a national workshop to develop standardized monitoring protocols for marsh birds. They also supported and participated in an informational waterfowl management symposium sponsored by the Minnesota Waterfowl Association. Major support was provided by Migratory Birds for a 3-year colonial waterbird survey throughout the Great Lakes and for development of status assessments for the northern goshawk, black tern, cerulean warbler, and loggerhead shrike. Assistance was provided for the annual breeding waterfowl survey in Minnesota, and coordination was furnished for the Woodcock Singing Grounds Survey, the Mourning Dove Call Count Survey, the mid-winter waterfowl survey, and the mid-December goose survey. Region 3 Migratory Birds Permit staff was instrumental in the standardization of Migratory Bird Permit conditions across the nation, and development and implementation of the new Servicewide Permit Issuance and Tracking System. The Habitat and Population Evaluation Team produced duck breeding population and production estimates and completed waterfowl management strategy documents for all Region 3 Wetland Management Districts.

The Migratory Game Bird program partnered with several states, USGS Biological Resources Division, Illinois Natural History Survey, the Wildlife Management Institute, the Provinces of Ontario and Manitoba, Minnesota Waterfowl Association, the Mississippi Flyway Council, the Office of Migratory Bird Management, and other Service offices to conduct surveys, research, management, and outreach for migratory game birds.

Fire Management

For the Service in Minnesota, 1998 was the best year in the last twenty in the use of prescribed fire. Almost 46,000 acres of agency lands were treated statewide.

Monitoring, especially of first order fire effects, continues to be a high priority of the Service. The Region is developing a standardized protocol to offer stations without a current monitoring strategy. It is based on a revised and greatly improved version of the National Park Service Fire Monitoring Handbook.

Minnesota based fire personnel from the Service assisted with suppression assignments in Florida, Texas, and Arizona, and represented the Service as a full partner in the Eastern Area Coordination Group, the Minnesota Incident Command System Task Force, and the Wisconsin Interagency Incident Command System.

The Service planned and made recommendations for allocation of funding to field stations for prescribed burning and other fire activities. This is a new funding authority which allows for obligation of emergency suppression dollars for meeting prescribed burning targets on Service lands.

Outreach

The Partners program is an effective mechanism for the Service to interact with private landowners on managing their lands for fish and wildlife resources. Through the Partners program most field stations in Region 3 have the capability to conduct an outreach effort with private landowners in its immediate vicinity.

Migratory Birds outreach and education activities are undertaken on a regular basis at most Region 3 field stations, especially National Wildlife Refuges. Nearly 20 stations reported celebrating International Migratory Bird Day (IMBD), with a theme of *Catch the Migration Sensation*. IMBD activities included birdwatching, lectures, art exhibits, bird-calling contests, banding demonstrations, and bird counts. Several birding festivals were also held in the Region. [NOTE: Many of these events were entered into the ARS.]

Regions 3, 5, and 9 collaborated, through the Great Lakes Ecosystem Team, on the preparation of fact sheets and a video on the life history of double-crested cormorants and their interaction with fisheries in the Great Lakes. This and other cormorant material is being posted on the Office of Migratory Bird Management's web site, which has greatly facilitated its dissemination to the public and the media.

Migratory Birds provided funding for the development of a poster on grassland birds of the Midwest and an educational leaflet on shorebirds of the Prairie Pothole Region.

Dozens of media calls and calls from the public regarding hunting regulations, population status of migratory birds, urban Canada geese, nontoxic shot, and Permits issues are handled each year.

Outreach (continued)

Radio and newspaper interviews on migratory birds and related issues are provided as requested.

Assistance is provided to field stations in the development of outreach materials through the Visitor Information Management section.

The North American Wetland Conservation Act and the NAWMP are actively promoted to existing and new partners within the Region.

Congressmen/women are notified of successful Act grant applications within their respective state or district and field tours are offered to them.

Duck Habitat Day, sponsored by Gander Mountain, attracted approximately 5,000 individuals to build wood duck and blue bird nest boxes. The Service had 5 booth areas where various program areas (e.g., Refuges, North American, Nongame, etc.) provided hands-on, educational opportunities to the public.

Partnerships are the keystone of the NAWMP, and additional emphasis has been placed on integration of the Plan with other bird conservation initiatives (e.g., Partners in Flight, shorebirds, etc.).

Goals for Fiscal Year 1999

- Provide quality customer service to field stations and Field Supervisors.
- Maintain the Refuge Management Information System database and provide technical assistance to the field regarding RMIS.
- Administer the Regional Maintenance Management System.
- Improve the accuracy and quality of RONS data from the field.
- Ensure that TEA 21 funding is focused on public roads that are safety concerns.
- Begin phase-in from FIREPRO to FIREBASE budget system.
- Conduct and evaluate the Regional Biologist Forum.
- Reinstate the field station evaluation process.
- Acquire land with appropriated Land and Water Conservation Fund, Migratory Bird Conservation Act, North American Wetlands Conservation Act, and flood monies.
- Continue to facilitate the use of Wetland Reserve Program easements in acquiring lands.

**Goals for Fiscal Year 1999
(continued)**

***Restore 5,000 acres
of wetlands, 3,000
acres of uplands, and
30 miles of riparian
habitat.
- Fiscal Year 99
Refuge Goal***

- National Environmental Policy Act compliance will be completed for Big Muddy National Fish and Wildlife Refuge, Charity Islands, and Grand Kankakee Marsh National Wildlife Refuge. NEPA compliance will also be started for Aldo Leopold National Wildlife Refuge if the proposal is approved by the Washington Office.
- Comprehensive Conservation Plans will be completed on five refuges and plans will be initiated or continued on six additional refuges. NEPA compliance will be initiated on these same areas as well as other areas that include land acquisition components likely to be pursued in Fiscal Year 1999.
- Promote and implement the NAWMP through the Joint Ventures.
- Protect, restore, and enhance wetlands and grasslands.
- Maximize North American Wetland Conservation Act grant dollars to Region 3 partners.
- Continue the integration of migratory game and nongame bird management actions.
- Continue to participate in the development of Partners in Flight Bird Conservation Plans and integrate them with similar efforts for shorebirds, waterfowl, and colonial water birds.
- Facilitate the development and implementation of status assessments for nongame bird species of concern, including the loggerhead shrike, common tern, cerulean warbler, northern goshawk, and golden-winged warbler.
- Continue outreach and biological information-gathering related to double-crested cormorants and fisheries in the Great Lakes.
- Continue to provide technical assistance to field stations, ecosystem teams, and outside entities on migratory bird monitoring and management issues.
- Ensure that migratory birds are adequately addressed in Comprehensive Conservation Plans, ecosystem plans, refuge evaluations, and refuge acquisition proposals.
- Develop a Regional Woodcock Management Plan.
- Conduct and coordinate the four square-mile waterfowl survey to estimate breeding pairs and production.
- Continue development of techniques for identifying areas with the greatest potential for waterfowl management.
- Assist with the development of national guidance on the management of migratory bird permits and further implementation of the Service Permits Issuance and Tracking System.

Goals for Fiscal Year 1999 (continued)

- Provide assistance to start-up groups which results in the formation of at least four new Friends groups regionwide.
 - Establish a Memorandum of Understanding with the National Park Service for exhibit and interpretive cooperation at Science Museum with proceeds from Bureau of Mines closing.
 - Assist Minnesota Valley National Wildlife Refuge with the establishment of a model trust fund for the administration of runway mitigation funds and planning for a sales outlet at the airport terminal.
 - Restore 5,000 acres of wetlands, 3,000 acres of uplands, and 30 miles of riparian habitat.
 - Provide technical assistance to U.S. Department of Agriculture where requested.
 - Serve as an inter- and intra-agency tool for developing partnerships.
 - Direct Challenge Cost-Share program to emphasize restoration of trust species habitats and partnership developments.
 - Emphasis in Fiscal Year 1999 will be for habitat restoration on refuge lands with known external threats.
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- Fire Management
USFWS photo

Fiscal Year 1998 Accomplishments

Great Lakes Ecosystem

Words for the Birds - An Evening of Nature Poetry

Shiawassee National Wildlife Refuge

This First Wednesday Discovery Series program was held in conjunction with the Theodore Roethke Festival. Fifty-three people participated in this program. The evening was kicked off with the "Roethke's Bird Scramble" where players had to match poetry excerpts with the birds they mention. Nine featured readers, including Park Ranger Marc Beaudin, read selections from Roethke and some of their own work. Ten other people read for the open mike. **5/98**

International Migratory Bird Day Celebrated at Green Point Learning Center

Shiawassee National Wildlife Refuge

Green Point Environmental Learning Center hosted its fourth annual International Migratory Bird Day Celebration on Saturday, May 9, 1998. The Mayor of Saginaw proclaimed the day as "International Migratory Bird Day" for the city. Seventy-five people attended the day's activities which featured Richard Mallery, author of "Dick E. Bird's Bird Feeding 101." Mallery provided a humorous look at birds, bird feeding, and squirrels. Other activities during the day included a migratory bird workshop for kids, a bird banding demonstration, the first-ever Bird Trivia Contest, Bird Eye-Q, a guided bird walk, and bird feeder building. Visitors had a chance to enjoy a free sample of shade-grown coffee and other refreshments. Eight volunteers donated 25.5 hours to help make the events possible. **5/98**

Refuge Shares 'Secrets of Campfire Cooking'

Shiawassee National Wildlife Refuge

Fourteen people attended the First Wednesday Discovery Series program, "Secrets of Campfire Cooking," June 3, 1998. Park Ranger Marc Beaudin showed the group how to build and light different kinds of cooking fires, construct implements to hold pans over the coals, and prepare utensil-less meals. Several delicious dishes cooked over the fire during the program were served to everyone. **6/98**

Wilderness Survival Part of Refuge's Summer Discovery Camp for Kids

Shiawassee National Wildlife Refuge

The annual Summer Discovery Camp for children was held Saturday, June 20, 1998. The Camp program ran from 10 a.m. to 3 p.m. Thirty-three children, ages five to 12 participated in the various activities which included learning about wildlife signs and tracks, wilderness survival, and pond life. They also took part in the first-ever Bird Olympics. Three volunteers donated 17.5 hours to help out during the day. **6/98**

Green Point Center Hosts Watching Wildlife Workshop

Shiawassee National Wildlife Refuge

On Saturday, July 11, 1998, the Green Point Environmental Learning Center hosted a Watching Wildlife Workshop from 9:00 a.m. to 12:00 p.m. Twenty-one people participated in various activities to help hone their wildlife watching skills. The group was very enthusiastic and got to see several species of birds while practicing their newly learned skills on a hike through the woods. **7/98**

Michigan Refuge Hosts EarthWalk Workshop

Shiawassee National Wildlife Refuge

Seven people attended the "EarthWalk Workshop" at the Green Point Environmental Learning Center August 15, 1998. The workshop course was for adults only. Participants practiced various wildlife observation skills, building survival shelters, building fires, and identifying and preparing wild edible plants. **8/98**

'The World of Bats' Program Held at Green Point Learning Center

Shiawassee National Wildlife Refuge

On Wednesday, September 2, 1998, the Green Point Environmental Learning Center held its monthly First Wednesday Discovery Series program. This month's topic was "The World of Bats." The Organization for Bat Conservation presented a lively and informative discussion on bats from around the world. The highlight of the evening was when live mega and micro bats were brought out for the audience to see up close. Thirty-three people attended the program. **9/98**

Shiawassee National Wildlife Refuge Hosts Open House, Auto Tour

Shiawassee National Wildlife Refuge

Approximately 700 people visited the Shiawassee National Wildlife Refuge during a two-day open house September 12-13, 1998. The open house gave the public an opportunity to explore the Refuge beyond the "Closed Area" signs during a time of year which is least disturbing to wildlife. A seven-mile, self-guided auto tour through the heart of the Refuge was also offered Sept. 12. Refuge volunteers provided a great deal of assistance with traffic flow and information. Refuge staff were also on hand to provide orientation. A total of 194 vehicles carrying 447 passengers took advantage of the chance to drive through the Refuge. **9/98**

Spring Raptor Migration Studied on Ottawa National Wildlife Refuge

Ottawa National Wildlife Refuge

Black Swamp Bird Observatory conducted research on Ottawa National Wildlife Refuge Complex and neighboring wetlands. Raptors were counted from standardized points to assess migration timing and the effects of land topography and weather were assessed. Data is used to provide public information on the importance of Lake Erie marshes to this high profile bird group. **9/98**

Refuge Monitors Migrational Movements and Habitat Use of Passerines

Ottawa National Wildlife Refuge

Black Swamp Bird Observatory monitored neotropical bird migration throughout Ottawa National Wildlife Refuge. Birds were captured using mist nets then banded, measured and assessed for their energetic condition. Migration timing and reproductive success were also monitored and point counts were used to compliment migration/banding information. Education programming was provided to visiting groups. **9/98**

Refuge Prairie Restorations Enhances Nesting Habitat in Three Ohio Counties

Ottawa National Wildlife Refuge

Ottawa National Wildlife Refuge conducted prairie restorations and habitat improvement projects over three Ohio counties in Fiscal Year 1998. In Ottawa County, 12 sites and 119 acres of native prairie were restored. In Sandusky County, native prairie was restored on three sites and 96.4 acres. In Erie County, one site,

and 10 acres were restored. The prairie restorations will improve waterfowl nesting habitat and provide enhanced winter cover for game and nongame birds. **9/98**

Bird Habitat Improved as Part of Sandusky County Prairie Restoration

Ottawa National Wildlife Refuge

This project restored 15 acres of native prairie in Sandusky County, Ohio, to improve waterfowl nesting habitat and provide enhanced winter cover for game and nongame birds. **9/98**

Ottawa County Prairie Restoration Improves 150 Acres of Nesting Habitat

Ottawa National Wildlife Refuge

This project restored 150 acres of native prairie to improve waterfowl nesting habitat and provide enhanced winter cover for game and / nongame birds. **9/98**

Sandusky County Prairie Restoration

Ottawa National Wildlife Refuge

This project restored 100 acres of native prairie to improve waterfowl nesting habitat and provide enhanced winter cover for game and nongame birds. **9/98**

Western Reserve Prairie Restoration

Ottawa National Wildlife Refuge

This project will restore 60 acres of native prairie in 15 townships and 3 counties to improve habitat for game, and nongame birds. Long-term agreements will be used to protect restored habitats. All seed has been purchased. The additional 20 acres will be completed in 1999. **9/98**

Migrating Shorebirds, Habitat Monitored at Ottawa National Wildlife Refuge

Ottawa National Wildlife Refuge

This project monitored migrating shorebirds for timing and speciation in the Lake Erie Marsh Region. It assessed shorebird habitat use and land management techniques to improve stopover habitat for this group of avian species on the Ottawa National Wildlife Refuge. Data will be used to assist in the documentation of registry of the marsh region as a shorebird reserve of international importance. **9/98**

Breeding Birds Surveyed on Small Wood Lots

Ottawa National Wildlife Refuge

Black Swamp Bird Observatory conducted research on Ottawa National Wildlife Refuge Complex and neighboring private lands. Small wood lots with and without human habitation were monitored using point counts to assess breeding birds and their relation to human activity. Point counts were conducted three times during June on all survey sites. Data will be analyzed to assess woodland type, size and human habitation of species diversity and abundance. **9/98**

20 Acres of Native Prairie Restored at Ottawa National Wildlife Refuge

Ottawa National Wildlife Refuge

This project restored 20 acres of native prairie for waterfowl nesting habitat and winter cover for both game, and non- game birds. The area had previously been used as croplands for corn and soybeans. Pheasants Forever contributed labor and equipment. **9/98**

Black Swamp Observatory Monitors Lake Erie Marsh Region Habitat

Ottawa National Wildlife Refuge

Black Swamp Bird Observatory continues to monitor shorebirds in the Lake Erie Marsh Region to better assess shorebird habitat use and land management practices. Data will be used to register area in the WHSNR. All field work has been completed for the season and final reports are due December 31, 1998. **9/98**

Fishery Inventory Assessment Survey at Ottawa Refuge

Ottawa National Wildlife Refuge

A fishery inventory survey was conducted on Ottawa National Wildlife Refuge during the summer months of 1998. All applicable pools and moist soil units were sampled using trap nets and hoop nets. Seining was done during night and daylight hours. This survey was done to quantify fish species on the Refuge which had not been identified before. A sample of species commonly found included: white crappie, black crappie, carp, white bass, white perch, sunfish, brown and black bullhead, and bowfin. Other species which were found, but not as common were: yellow perch, largemouth bass, and steelhead. **9/98**

Youth Trapping Program Reduces Muskrat Density

Ottawa National Wildlife Refuge

Two youths participating in the youth trapping program were assigned specific units within Ottawa National Wildlife Refuge where muskrat population densities were high enough to become a maintenance concern to dikes and roadways. A total of 265 muskrats were harvested from the two units. **3/98**

Adult Trapping Program Reduces Muskrat Density

Ottawa National Wildlife Refuge

Two units at Cedar Point National Wildlife Refuge had more than 400 muskrat huts and broad expanses of open water indicating muskrat population densities were causing habitat damage. Two adult trappers were selected by highest bid to trap Cedar Point National Wildlife Refuge. A total of \$3,527.77 was collected in bids and 2,878 muskrats removed. **3/98**

Congressional Staff Contacts on Whittlesey Creek

St. Croix Wetland Management District

Maureen Gallagher and Steve Delehanty traveled to Washington, D.C., to meet with Congressional staff regarding the proposed Whittlesey Creek National Wildlife Refuge. Congressional staff were particularly interested in the issue of snowmobiling on the Refuge. **4/98**

Spring Marsh Bird Surveys Completed at Ottawa

Ottawa National Wildlife Refuge

Virginia rails, king rails, sora, least bitterns, American bitterns and pied-billed grebes were surveyed on Ottawa National Wildlife Refuge during the months of April-June. Data was summarized and made available to Ohio Division of Wildlife-Ohio Breeding Bird Survey. Marsh bird protocols are being investigated at the national level which may bring changes in methods and results in the future. Current data is used to evaluate and determine management objectives and goals of specific units within the Refuge. **6/98**

Tree Swallow Banding at Ottawa National Wildlife Refuge

Ottawa National Wildlife Refuge

In 1998 the bluebird nest box program was increased from 53 to 105 boxes. Forty-seven boxes were already in place at the Davis Besse Nuclear Power plant and being monitored by a Davis-Besse employee and Ottawa volunteer. The new boxes were placed on Ottawa where only nine were in place. Although no bluebirds were reported using the boxes this year, they will remain in their current location through next year. Two boxes were used by house wrens. A total of 202 tree swallows were banded. This number indicated a 47 percent fledg rate from the total number of eggs counted throughout the surveys. **7/98**

Galerucella Beetles Released at Ottawa National Wildlife Refuge

Ottawa National Wildlife Refuge

Shiawassee National Wildlife Refuge donated 19,214 galerucella beetles to Ottawa National Wildlife Refuge to assist them in their battle with purple loosestrife. Immediately after picking up the beetles at Shiawassee, the beetles were returned to Ottawa National Wildlife Refuge where they were released in the Darby Unit. Some beetles had survived in the area from previous releases, so the site was determined to be suitable. Thirty days after the release, herbivory was already evident on the 7.5-acre release site. **7/98**

West Sister Island National Wildlife Refuge Rookery Count Reveals Increased Nestings

Ottawa National Wildlife Refuge

Ottawa National Wildlife Refuge staff and volunteers with the Black Swamp Bird Observatory conducted a rookery nest count on West Sister Island in early July 1998. Great blue heron nest numbers increased by 26 percent to 1,160; great egrets increased by 14 percent to 807 and double-crested cormorants increased by 10 percent to 1,513. Black-crowned night heron nests decreased by 3 percent to 467. A single nest of cattle egret was also found this year. None of the changes from 1997 were statistically significant. The U.S. Coast Guard provided transportation to and from the island. **7/98**

Wisconsin DNR Helps Horicon National Wildlife Refuge Meet Mallard Banding Quota

Horicon National Wildlife Refuge

Horicon National Wildlife Refuge completed its mallard duck banding quota of 400 birds on September 23, 1998. Staffers and wardens from the Wisconsin Department of Natural Resources participated in the banding. The recently graduated class of Department of Natural Resources wardens also attended, where they learned more about the banding program, handling of waterfowl, and how to age and sex mallards using feather and bill characteristics. **9/98**

Cooperative Agreement Restores 55 Wetland Acres

Ottawa National Wildlife Refuge

The Ottawa National Wildlife Refuge Private Lands program, in cooperation with the Lenawee County, Ohio, Soil and Water Conservation District (SWCD,) Ducks Unlimited, Lenawee County Preservation Fund, and the Natural Resource Conservation Service restored 15 wetlands for a total of 55 acres. The restorations were completed through a cooperative agreement between the Service's Partners for Wildlife Program, Lenawee Preservation Fund and the Lenawee County SWCD. Administration was handled by the Service and Lenawee SWCD while the groundwork was completed by a Preservation Fund biologist. The Partners for Wildlife program and Ducks Unlimited provided the funding for construction costs to complete the projects. **9/98**

Ottawa National Wildlife Refuge Crew Restore 70 Acres of Wetlands

Ottawa National Wildlife Refuge

The Ottawa National Wildlife Refuge Private Lands program in cooperation with the Hillsdale County Natural Resources Conservation Service, and Lenawee County, Ohio. Pheasants Forever restored 14 wetlands for a total of 70 acres in Hillsdale County, Michigan. The restorations were completed by a construction crew from the Ottawa National Wildlife Refuge. **9/98**

Service Technical Assistance Provided to Wetland Reserve Program

Michigan Private Lands Office
the Michigan Private Lands Office participated in the Wetland Reserve Program review of, and made biological recommendations to, the Natural Resources Conservation Service regarding 40 properties totaling more than 7,300 acres. During Fiscal Year 1998, NRCS obligated approximately \$6 million to protect 8,000 acres in Michigan through the WRP. The technical assistance provided by the Service has enhanced the biological value of these conservation easements for migratory birds including waterfowl. **FY98**

Assistance to NRCS Focuses on Wildlife, Improved Habitat Through EQIP Program

Michigan Private Lands Office
The Michigan Private Lands Office provided technical assistance to the NRCS to enhance wildlife benefits from the \$3.2 million Environmental Quality Incentives Program in Michigan. While much program emphasis was on livestock-related practices, input from the Service steered some effort toward providing wildlife habitat while protecting soil and water resources. **FY98**

Service Assists NRCS With \$15.5 Million Conservation Reserve Program

Michigan Private Lands Office
The Michigan Private Lands Office provided technical assistance to the Natural Resources Conservation Service to enhance wildlife benefits derived from the \$15.5 million Conservation Reserve Program in Michigan. The Service provided recommendations to improve the quality of habitat enrolled in Fiscal Year 1998 for migratory birds and endangered species. **FY98**

Technical Assistance Provided to NRCS for WHIP

Michigan Private lands Office
The Michigan Private Lands Office provided technical assistance to the Natural Resources Conservation Service to enhance wildlife benefits derived from the \$500,000 Wildlife Habitat Incentive Program in Michigan. The Service provided recommendations to improve the quality of habitat enrolled in Fiscal Year 1998 for migratory birds and endangered species. **FY98**

Service Assists Farm Service Agency to Restore, Protect Habitat

Michigan Private Lands office
The Michigan Private Lands Office provided technical assistance to the Farm Service Agency to identify and delineate conservation easements to be placed on inventory properties. During Fiscal Year 1998, the Service provided recommendations to protect and restore habitat for migratory birds and endangered species through placement of five conservation easements encompassing 228.1 acres. **FY98**

Michigan Private Lands Office Conducts Outreach Activities

Michigan Private lands Office
The Michigan Private Lands Office conducted outreach activities that reached more than 120,000 visitors with messages related to trust resources including migratory birds and endangered species. Activities included displays at the State Capitol(15,000 visitors), Outdoorama show (100,000), Bluebird Festival (2,700), Maple Syrup Festival (1,500) and International Migratory Bird Day celebration (1,900). **FY 98**

22 Wetland Restorations Completed, 160 Acres Total

Michigan Private Lands Office
Through partnerships, the Michigan Private Lands Office completed 22 wetland restorations totaling 160 acres. The Michigan Wildlife Habitat Foundation, through a cooperative agreement, completed the bulk of these restorations. These projects were often completed with cooperation from county drain commissioners. Additional restorations were completed through the Kalamazoo Conservation District. Partners, including landowners, contributed approximately 50 percent of the cost of the projects. **FY98**

Wisconsin Partnership Nets 3,800 Acres of Wetland Habitat

Wisconsin Private Lands Office

Three biologists hired through a partnership between the U.S. Fish and Wildlife Service, Natural Resources Conservation Service and the Wisconsin Waterfowl Association have secured over 3,800 acres of restorable wetland and associated uplands in key wetland areas of Wisconsin for the Wetlands Reserve Program. The lands, located in 108 different parcels, will be restored under either 10-year or 30-year agreements, or perpetual easements. Funds are being provided by the Wetlands Reserve Program and the U.S. Fish and Wildlife Service. The biologists are formally employed by the Wisconsin Waterfowl Association, but work out of Service offices. The WWA is also administering funds for the Natural Resources Conservation Service. **7/98**

Upper Mississippi River Ecosystem

Trempealeau National Wildlife Refuge Hosts Deer, Duck Hunts for Disabled Hunters

Trempealeau National Wildlife Refuge

Four disabled hunters participated in Trempealeau Refuge's annual deer hunt. The hunt took place from October 4-12, 1998, on the Upper Farm area of the Refuge. No deer were taken, but the hunters appreciated the opportunity. On October 18-19, 10 disabled waterfowl hunters participated in the ninth annual hunt on the Upper Farm area of Trempealeau National Wildlife Refuge. Two volunteers coordinated hunters, other volunteers, and equipment. Twelve volunteers and their dogs assisted the hunters on the two days of the hunt. A record number of ducks were harvested and all enjoyed the experience. **10/97**

Students Learn About Wetlands, Birds and Outdoors During Environmental Field Days

Trempealeau National Wildlife Refuge

Five hundred seventy-five eighth graders from Trempealeau County schools visited the Refuge October 1-2, 1997, as part of Environmental Field Days, an annual event designed to instruct the students in outdoor issues. Refuge staff and five volunteers conducted programs on aquatic invertebrates, wetlands, birds, and migration. **10/97**

Brownie Troop Collects Seeds for Trempealeau National Wildlife Refuge

Trempealeau National Wildlife Refuge

Twenty scouts from a local Brownie troop spent the morning of October 18, 1997, at Trempealeau Refuge learning about prairie management. The girls collected seeds from various grasses including big bluestem, little bluestem, Indian grass, and sideoats grama as well as prairie flowers including blazing star, purple prairie clover, and whorled milkweed. They spread the seed in an adjacent area where native grasses were sparse. **10/97**

Necedah National Wildlife Refuge Initiates Oak Barrens Restoration

Necedah National Wildlife Refuge

Necedah National Wildlife Refuge completed a selective thinning of 220 acres of upland forest to restore oak barrens habitat. This rare habitat has decreased from 12 percent to less than 0.14 percent of Wisconsin's land base. This is the beginning of a program to restore approximately 3,000 acres of oak barrens at the Necedah Refuge. Prescribed fire will finish the task of removing the slash and rejuvenating the habitat. **10/97**

Necedah National Wildlife Refuge Met 1997 Banding Quota with 741 Birds

Necedah National Wildlife Refuge

The 1997 banding season closed October 18, 1997. Two scout groups, two school groups and attendees at the National Wildlife Refuge Week open house participated in the banding experience. The Necedah National Wildlife Refuge was assisted by members of the Wisconsin Conservation Corp and two other refuge volunteers. These assistants helped Refuge staff with baiting, capturing, handling, and recording. **10/97**

Boy Scout Troop Completes Fishing Pier

Mark Twain National Wildlife Refuge

Boy Scout Troop 90 from Davenport, Iowa, has completed a handicapped-accessible fishing pier on the Louisa Division of the Mark Twain National Wildlife Refuge. The construction of the pier was Jason Shadrack's Eagle Scout Project, and he and his fellow scouts contributed 250 hours towards its construction. The pier is 360 square feet in size, and will allow anglers of all ages and abilities to fish at the popular Lake Odessa inlet channel. **12/97**

Winona District Assists With Prairie Seedings

Upper Mississippi National Wildlife and Fish Refuge

The Winona District has purchased a no-till Truax grass drill to assist other agencies and private landowners with prairie seedings, primarily on land enrolled in the Conservation Reserve Program. During 1997, 83 acres were seeded among 12 sites in four counties in Wisconsin and one county in Minnesota. The drill was purchased partly with Service Challenge Grant funds with six different partners providing financial assistance — Wisconsin Department of Natural Resources, Pheasants Forever, Alma Rod and Gun Club, Winona County Soil and Water Conservation District and Minnesota Waterfowl Association. **11/97**

“Ducks on a Stick” Purchased Through Challenge Grant

Upper Mississippi River National Wildlife and Fish Refuge

Seven local groups contributed \$1,125 to match Service funds for the 30 waterfowl mounts that will make up the collection. The specimens include the more common waterfowl species that are found on the Upper Mississippi Refuge. The 15 completed specimens have been used several times this fall for educational purposes. The seven contributors include: Swan Watch, Alma, Wis; Ducks Unlimited, LaCrosse, Wis. and Winona, Minn; Winona Senior High School Biology Class; Minnesota Department of Natural Resources; Dodge Sportsmen Club and Alma Rod & Gun Club. **12/97**

Five-Month Drawdown of Lizzy Paul’s Pond Completed

Upper Mississippi National Wildlife and Fish Refuge

A partial water level drawdown of the 51-acre Lizzy Paul’s Pond near Alma, Wisconsin, was conducted via pumping from June 23, 1997 through October 14, 1997. The project’s objectives are to enhance wetland vegetation and improve habitat for fish and wildlife. This project, funded under the Environmental Management Program, could provide the basis for public support for larger water level manipulations on a pool-wide scale in the future. **10/97**

Horicon Refuge Participates in Environmental Education Fair

Horicon National Wildlife Refuge

Horicon National Wildlife Refuge staffed a booth for the first annual Washington County Environmental Education Resources Fair held at Kettle Moraine Lutheran High School on Oct. 21, 1997. The booth promoted environmental education opportunities available through the Refuge, such as the Prairie Trunk, field trips and other programs, free poster, maps, and brochures. The fair was sponsored by the Environmental Subcommittee of Healthy Washington County and was geared to K-12th grade teachers and youth leaders. A hefty Community Resources Environmental Education Directory was also provided to all participants, and its listings included refuge offerings. **10/97**

Successful, Busy Tourist Season at Horicon National Wildlife Refuge

Horicon National Wildlife Refuge

The visitor center was open every day again this fall to provide extended hours and services to tourists during the busiest public use season of the year. Over 13,500 people used the visitor center during that time and enjoyed marsh exhibits, the viewing deck with spotting scopes, souvenirs and gifts for sale at Coot’s Corner, and a staffed information counter. Thirteen volunteers staffed the visitor center and worked 311 hours. When volunteers were not available to work, five intermittent employees filled in, working 384 hours for the season. Other Refuge employees helped out when needed as well. **11/97**

Horicon Refuge Sales Area Nets \$12,000 During Fall

Horicon National Wildlife Refuge

Almost \$12,000 was made during the fall season at Horicon National Wildlife Refuge’s sales area, Coot’s Corner, administered by the Midwest Interpretive Association. This amount in net sales is significantly up from last year. In addition, the donation box received more than \$400. **11/97**

Winona Hosts Fourteenth Annual Swan Watch

Upper Mississippi National Wildlife and Fish Refuge

Refuge biologists participated in the Fourteenth Annual Swan Watch hosted by the Winona, Minn., Area Convention and Visitor Bureau. On Sunday, November 2, 1997, swan watchers were able to view flocks of 150 to 900 birds at 5 different locations during the auto tour. There were 70 swan watchers participating in the event. **11/97**

Wapello District's Auto Tour Features Ducks, Geese and Bald Eagles

Mark Twain National Wildlife Refuge

The Mark Twain National Wildlife Refuge, Wapello District, conducted a special auto tour of the Louisa Division on November 9, 1997. The Division is normally closed to all public entry in the fall, but was opened for this one-day event. Ducks, geese, and bald eagles performed for the 530 visitors who attended and the entire refuge staff was on hand to answer questions. The staff received nothing but positive comments about the tour, which was attended mainly by families. **11/97**

Refuge Friends Organization Begin Their Membership Drive

Upper Mississippi National Wildlife and Fish Refuge

The Savanna Chapter of the Friends of the Upper Mississippi River Refuges, kicked off their membership drive at the board meeting held in Savanna, Illinois. The Friends' goals are to support the multi-use concept, inform the public about the benefits of national wildlife refuges, provide opportunities for volunteers, locate funding for projects and activities to enhance the Refuges and inform elected officials about Refuge issues. Three volunteers of the Savanna District have donated 200-plus hours in the organization of the Friends Group. **11/97**

Cyber-Hunters Track Waterfowl Migrations on World Wide Web

Upper Mississippi River National Wildlife and Fish Refuge

Waterfowl hunters are turning to the World Wide Web for waterfowl population information on the Upper Mississippi River National Wildlife and Fish Refuge. During waterfowl season, biologists from the Service and the Wisconsin Department of Natural Resources fly over the Refuge to count ducks, geese, swans, and other

water birds. Each week during fall migration, three air crews cover nearly 300 miles of river, coordinating flights according to staff availability and the weather. Refuge staff post the waterfowl numbers on the Internet as soon as possible, usually within a week of the flight. The data are accessible on the Web 24 hours a day. Many hunters have responded positively to the Internet service, citing the information as "invaluable". During 1996, the number of hits on all Refuge pages was approximately 10,500; in 1997, the number was close to 28,000. **2/98**

80,000 Tree Seedlings Planted on Cypress Creek National Wildlife Refuge

Cypress Creek National Wildlife Refuge

Cypress Creek Refuge staff and volunteers began the annual reforestation efforts on January 30, 1998; the earliest that Refuge staff have ever started planting. Due to warm and dry weather conditions, staff and volunteers planted 80,000 seedlings over approximately 200 acres. Another 35,000 seedlings will be acquired from the state tree nursery for contract planting in the low, wet areas and additional planting by Refuge staff. The Refuge is fortunate to have funding assistance from outside sources; each year over \$40,000 is contributed to the reforestation effort on Cypress Creek National Wildlife Refuge. **2/98**

Necedah National Wildlife Refuge Completes GIS Office Work Space

Necedah National Wildlife Refuge

Refuge staff constructed a new office in unused space in the basement of the main headquarters building. All work was done by force account. The office is now complete for GIS/LIS work. This will be a dedicated shared area for any Refuge staff or interns working with GIS systems. GIS work itself is a relatively new endeavor for the Necedah Refuge, so having a facility to accommodate learning will greatly enhance capabilities. **2/98**

...project will restore 60 acres of native prairie in 15 townships and 3 counties to improve habitat for game, and nongame birds.

***-Western Reserve Prairie Restoration
Ottawa National Wildlife Refuge***

Necedah Refuge Helps High School's 'Save Our Streams' Program

Necedah National Wildlife Refuge

Biology and chemistry classes from Necedah High School came to Necedah National Wildlife Refuge to explore concepts of watersheds, water quality, and how they relate to fish, wildlife, plants, and people. Two teachers and 86 students measured water for pH, dissolved oxygen, hardness and took samples from several sites to inventory aquatic invertebrates in two Refuge pools. Isaak Walton League's "Save Our Stream" invertebrate sampling protocols and materials were used to structure the program. **4/98**

Necedah National Wildlife Refuge Gives Karner Blue Butterfly Program

Necedah National Wildlife Refuge

A slide presentation explaining the life requirements of the federally-endangered Karner blue butterfly was given at Necedah Municipal Hall. After the slide presentation, a question and answer period was held on the program and any other questions or concerns the visitors had. The Necedah National Wildlife Refuge CCP was also discussed and a comment period was allowed. **4/98**

Third Bald Eagle Nest Discovered at Necedah National Wildlife Refuge

Necedah National Wildlife Refuge

A third bald eagle nest was observed in the Sprague-Mather Flowage in April. The nest site is northwest of Dam 30 and is visible from the Sprague dike and also from a section of the auto tour route which passes between Goose Pool and West Sprague Pool. This is the third eagle nest built on the Necedah National Wildlife Refuge since 1995 and appears to be used by the same pair of eagles that initiated the two previous nests. **5/98**

Baraboo Wetland Restoration Moves Ahead

Wisconsin Private Lands Office

Options have been signed with Wisconsin landowners to enter into the Wetlands Reserve Program and to sell to the Service. Projects involve 900 acres of restorable wetlands in the flood plain of the Baraboo River. Funds will come from Natural Resources Conservation Service, Ducks Unlimited, Wisconsin Department of Transportation, and the Service. Property will be under the ownership and management of the Service and will be established as a waterfowl production area. Total project cost is estimated at \$1.3 million. **4/98**

Necedah Refuge Hosts Open House for Wildlife Week

Necedah National Wildlife Refuge

The National Wildlife Week celebration weekend included a presentation on the history of the Refuge, tours of the facilities, discussion on the CCP and vegetation identification tours. The events were held not only for National Wildlife Refuge Week, but to familiarize visitors with what the Refuge has to offer and to provide discussion on management practices. Those attending were able to have one-on-one interactions with staff. **4/98**

Necedah's Refuge Office Renovation Project Completed

Necedah National Wildlife Refuge

The headquarters office area was remodeled to better accommodate visitors, yet provide privacy for staff. Walls were constructed making a more efficient area in a large back room for three work areas. A pocket door was put in the office immediately adjacent to the visitor contact area to enable an administrative technician to cover easily when front desk staff are away. Another benefit was increased storage areas resulting in less visible clutter. **3/98**

Necedah Refuge Reaches out to 5,000 Students for Wildlife Week

Necedah National Wildlife Refuge

Student intern Lori Bills from Fox Valley Tech College contacted 36 area schools and distributed National Wildlife Refuge Week packets and videos to help observe National Wildlife Refuge Week, April 19-25, 1998. Ms. Bills also selected and duplicated the appropriate videos to further illustrate this year's theme, "Nature's Web". An additional 12 schools and 4-H organizations were also contacted and provided with packets by refuge staff. **4/98**

Water Pumps Course Conducted at Necedah National Wildlife Refuge

Necedah National Wildlife Refuge

Seventeen individuals from the University of Wisconsin-Stevens Point fire crew attended an eight-hour field course training at Necedah National Wildlife Refuge to learn and practice operating water pumps and setting up various hose laps. Refuge staff and University Fire Crew members put the course on to provide interagency emergency response crew members a part of the required training and experience needed to perform various tasks. **4/98**

Successful Trapping Season Ends at Horicon National Wildlife Refuge

Horicon National Wildlife Refuge

In conjunction with the Department of Natural Resources, an auction was held in September for the 1997-98 trapping season. Three dike units, eleven marsh units, and two upland units were sold on the Refuge for \$8,130. In addition, three youth units were given away at no charge. Total harvest for the season was 7,744 muskrats, 73 raccoons, 86 opossum, 16 mink, six skunk, and three fox. **3/98**

Students 'Vacation' at Crab Orchard, Receive Hands-On Refuge Experience

Crab Orchard National Wildlife Refuge

When many college students hit spring break they spend their time basking in the sun in Florida, Jamaica, or Cancun. This year four Southern Illinois University students spent their spring break assisting the Refuge in resource planning, recreation management, visitor information center operations, forestry management, wildlife management and public use management programs. Working cooperatively through the SIU Alumni Association Extern program, students received hands-on experience while the Refuge received professionally-trained assistance in its diverse management programs. **4/98**

Eagles are Back at Crab Orchard

Crab Orchard National Wildlife Refuge

For the first time in more than two years, three pairs of bald eagles are again incubating eggs on the Crab Orchard National Wildlife Refuge. Three years ago, great horned owls evicted one nesting pair and cut eagle production in half, from six young birds to three young birds on the Refuge. Not to be outdone, a new nest was built by one pair of eagles and eggs are being incubated. **4/98**

National Wetland Program Coordinator Visits Cypress Creek Refuge

Cypress Creek National Wildlife Refuge

Cypress Creek Refuge, The Nature Conservancy, and the Natural Resources Conservation Service hosted Bob Misso, national Wetland Reserve Program (WRP) coordinator, on a tour of lands proposed for enrollment in WRP. The properties highlighted included 2,650 acres that are within the Refuge and state purchase boundary. The tour highlighted accomplishments, partnerships, and demonstrated restoration potential in the

watershed that can be achieved with the assistance of the WRP program. **1/98**

Necedah National Wildlife Refuge Timber Salvage Sale Completed

Necedah National Wildlife Refuge

Forty acres of flooded and insect-damaged trees were salvaged by a local timber buyer offering the highest bid. The harvesting not only adds a little help to the local economy, it also reduces fuel loadings on federal property adjacent to private lands thereby reducing wildfire hazard potential. The harvesting also makes room for regeneration of wildlife-dependent habitat. **1/98**

Horicon Refuge Complex Hosts Neighbors Gathering

Horicon National Wildlife Refuge

Horicon National Wildlife Refuge employees hosted another successful Neighbors Gathering. Over 100 Refuge neighbors, members of the media, and Congressional representatives were invited to this annual event. Refuge staff took turns recapping 1997's events in all program areas, including biology, public use, maintenance, construction, management, etc. Staff also talked about the highlights for 1998. Many positive comments were received, including good suggestions for improvements. **2/98**

Proposed Baraboo Waterfowl Production Area Acquisition Gains New Partner

Leopold Wetland Management District

Leopold Wetland Management District, Wisconsin Private Lands Office, Natural Resources Conservation Service and Wisconsin Department of Transportation are teaming up to propose a 900-acre acquisition near the confluence of the Baraboo and Wisconsin Rivers. A 30-year Wetland Reserve Program easement will piggyback this acquisition if offers to seven landowners are accepted. Recently, the project was presented at the Wisconsin Ducks Unlimited annual meeting, and the committee endorsed a \$50,000 marsh proposal to become a major partner. **1/98**

Horicon Refuge Reaches Outdoor Enthusiasts at Milwaukee Sports Show

Horicon National Wildlife Refuge

Refuge staff partnered again this year with the America's Outdoors Center to provide outreach at the Milwaukee Journal-Sentinel Sports Show, March 13-22, 1998. A booth focusing on outdoor federal recreational lands, plus the interactive Smokey Bear's classroom for kids was also staffed by Bureau of Land Management, Forest Service and National Park Service staff throughout the show. A record 145,000 people attended the show, with an estimated 10,000 people stopping by the booth. Refuge staff also provided a slide show seminar about the Refuge. Necedah National Wildlife Refuge and Upper Mississippi River Refuge provided station information for distribution. Necedah Refuge staff also helped man the booth. **3/98**

Horicon Refuge Celebrates National Wildlife Refuge System Birthday

Horicon National Wildlife Refuge

Horicon National Wildlife Refuge celebrated the 95th anniversary of the National Wildlife Refuge System with the "Wild Things Birthday Party," and by having the Visitor Center open for the day. Twenty-five people attended the program, which was fully booked two months in advance by two girl scout groups. Activities included a wildlife signs slide show and guided hike, party games, cake, punch, and goody bags. Eighty news releases were mailed in advance, and known media coverage was provided by the Daily Citizen, WMRH, and WBEV. Intern Kasha Christopherson assisted with activities, and volunteer Nancy Hall staffed the Visitor Center. **3/98**

Service Signs Multi-Organization Agreement to Restore Wisconsin Prairie

Wisconsin Private Lands Office

The Department of Defense, Wisconsin Department of Natural Resources, National Park Service, Forest Service, University of Wisconsin, The Nature Conservancy, The Prairie Enthusiasts, Sayuk County Natural Beauty Council, International Crane Foundation, Pheasants Forever, and the Aldo Leopold Foundation have entered into a Memorandum of Understanding to restore prairie and savanna habitats on the Badger Army Ammunition Plant in Sauk County, Wisconsin. Badger is the site of the former Sauk Prairie of Wisconsin. It is an historically and geologically significant area of the state

that links the Wisconsin River with the Baraboo Hills and the Devil's Lake State Park.

Restoration of the area is anticipated to take several years. **3/98**

Service Attends 1998 Wisconsin Aquaculture Conference

LaCrosse Fish Health Center

Richard Nelson, Project Leader, LaCrosse Fish Health Center (Onalaska, Wis.) attended the Wisconsin Aquaculture Advisory Board Committee Meeting on March 12, 1998, in Eau Claire, Wis. On March 13-14, 1998, Richard Nelson and Myron Kebus (DVM, WAVS) conducted a joint workshop on Fish Health Management at the Wisconsin Aquaculture Conference in Eau Claire. Fish health brochures and books were available, and question and answer sessions were held. Approximately 500 people attended. **3/98**

Necedah National Wildlife Refuge Constructs New Pool

Necedah National Wildlife Refuge

Necedah staff operated equipment (dozers, backhoes, dump trucks) to develop a new pool on the Necedah National Wildlife Refuge, Egret Pool, which will restore 45 acres of drained wetlands. The water control donated by Wisconsin Waterfowl Association will enable staff to manipulate water levels to achieve optimum waterfowl habitat during spring and fall migrations. **10/98**

Former CCC Tree Plantation Thinned on Necedah Refuge

Necedah National Wildlife Refuge

Necedah National Wildlife Refuge staff and the Wisconsin Conservation Corps members marked trees to be cut, cruised, and tallied the total stumps to be harvested. A local forest product buyer entered the highest bid for the 50-acre plantation thinning. The historic plantation was showing signs of stress from insects and high stand density. The thinning will allow further growth of healthier trees, providing a unique visual experience for the visiting public to walk beneath some of the Refuge's largest trees. **1/98**

Service and Partners Team up to Implement Wetland Reserve Program

Leopold Wetland Management District

The cooperative effort to implement the U.S. Department of Agriculture's Wetland Reserve Program at Leopold Wetland Management District was a success. The first-ever implementation involved the cooperation of the U.S. Fish and Wildlife Service, Natural Resources Conservation Service and the Wisconsin Waterfowl Association (WWA). With WRP Biologist Sean Sallman, on board for only seven months, 74 landowner contacts were made. Of these contacts, seven elected to sign a 30-year or perpetual easements, 10 enrolled in Conservation Reserve Program, two had projects completed through Partners for Wildlife, and 28 were eligible for the 10-year program. To date, seven wetland basins have been restored covering 41.5 acres. Sallman is employed by the WWA, and works out of the Leopold WMD office and uses a Service vehicle and equipment. **3/98**

Wisconsin Wetland Reserve Partnerships Reaps Benefits

Wisconsin Private Lands Office

In cooperation with Natural Resources Conservation Service and the Wisconsin Waterfowl Association, the Service Wetland Reserve Program (WRP) partnership contacted 147 landowners in 21 counties of eastern Wisconsin from June through December 1997. The contacts resulted in 72 active WRP projects totaling more than 1,500 acres of wetlands and upland nesting cover. The projects are in various stages of planning. It is hoped that most will result in completed wetland restorations during the 1998 construction season. Funding is being provided by Natural Resources Conservation Service and the U.S. Fish and Wildlife Service offices in Madison and Mayville, Wisconsin. Wisconsin Waterfowl Association is administering the NRCS funds. **1/98**

305 Acres Added to Gregory Landing Division at Mark Twain Refuge

Mark Twain National Wildlife Refuge

After clearing several hurdles the 305-acre Logsden tract has been acquired as part of the Gregory Landing Division. The Division now totals 2,100 acres. The tract included a 171-acre Wetland Reserve Program (WRP) easement. Refuge staff provided critical technical assistance on a 70-acre wetland

restoration project completed as part of the WRP contract prior to Service acquisition. The tract has good potential for other diverse habitat restoration including bottomland forest and warm season native grasses. A small levee may also be removed restoring flood plain hydraulic functions to 130 acres of the Fox River. Although not large, the 2,000-acre Gregory Landing Division is significant because it is located along a portion of the Mississippi River that is heavily degraded and lacking in protected forests and wetlands. **1/98**

Annada District Participates in Eagle Days Events

Mark Twain National Wildlife Refuge

Staff from the Annada District participated in the annual Eagle Days celebration held in the city of Clarksville the weekend of January 23-25, 1998. A bald eagle display was viewed by 1,500 fourth and fifth graders, teachers, and parents. **1/98**

Special Muzzleloader Deer Hunt on Delair Division

Mark Twain National Wildlife Refuge

Forty-seven hunters participated in the three-day hunt held Jan. 9-11, 1998. Seventy-two deer were harvested. This is the third year of full participation in the hunt. The harvest is needed to keep the deer population from overpopulating and damaging crops and other resources both on and around the refuge. **1/97**

LaCrosse River Eagle Watch a Success

Upper Mississippi River National Wildlife and Fish Refuge

The Eagle Watch was held December 20-21, 1997, and January 3-4, 1998. This was the first organized Eagle Watch held in the LaCrosse, Wisconsin area. More than 400 people participated in the event, which was advertised in several local newspapers, and given top billing on two local television broadcasts after the opening day. The event was made possible through a Service Challenge Cost Share which was used to purchase equipment needed for the event. **1/98**

Wisconsin Offices Awarded \$520,000 for Private Lands Habitat Restoration

Wisconsin Private Lands Office

Service field stations in Wisconsin have been awarded \$88,900 through the Service Challenge Cost Share Program. This funding will be matched by \$440,000 from many partners. The funds will be used to restore an estimated 1,200 acres of wetlands, grasslands, and stream habitat on private lands in the state. The funds will be used by the stations as part of the Service's Partners for Wildlife Program which has restored over 7,000 acres of wetlands and other important habitats in the state. **12/97**

Horicon Marsh Receives Water Quality Monitoring Stations

Horicon National Wildlife Refuge

In an effort to learn more about the water quality around the Horicon Marsh, three monitoring stations were installed by the U.S. Geological Survey. Numerous partners made this project a reality. Flow velocity and depth is being measured and water samples taken and analyzed to determine the quantity of phosphorous and sediment entering the marsh. The quality of the water leaving the marsh is also being determined. **12/97**

Sixteen Deer Taken During Hunt at Trempealeau National Wildlife Refuge

Trempealeau National Wildlife Refuge

The Trempealeau Refuge held a deer hunt coinciding with Wisconsin's gun deer hunt at the end of November 1997. Sixty permits were sold to persons interested in hunting on the Refuge. During the opening weekend, 16 deer (nine bucks, seven does) were registered on the Refuge. Two volunteers staffed the registration station. An estimated thirty permit holders hunted on the Refuge during the nine-day season. The hunt serves to manage deer population levels on the Refuge. **11/97**

Necedah National Wildlife Refuge Initiates Oak Barrens Restoration

Necedah National Wildlife Refuge

Necedah National Wildlife Refuge completed a selective thinning of 220 acres of upland forest to restore oak barrens habitat. This rare habitat has decreased from 12 percent to less than 0.14 percent of Wisconsin's land base. This is the beginning of a program to restore approximately 3,000 acres of oak barrens at the Necedah Refuge. Prescribed fire will finish the

task of removing the slash and rejuvenating the habitat. **10/97**

Refuge Surpasses Wood Duck Banding Quota *Upper Mississippi River National Wildlife and Fish Refuge*

District staff banded 257 wood ducks during a two-week period in August, surpassing the District's quota by 157 birds. Due to construction projects at Trempealeau National Wildlife Refuge, its staff was unable to band this year. District staff continued banding to achieve Trempealeau's quota. **9/97**

Refuge Friends Organization Begin Their Membership Drive

Upper Mississippi National Wildlife and Fish Refuge

The Savanna Chapter of the Friends of the Upper Mississippi River Refuges kicked off their membership drive at the board meeting held in Savanna, Illinois. The Friends' goals are to support the multi-use concept, inform the public about the benefits of the national wildlife refuges, provide opportunities for volunteers, locate funding for projects and activities to enhance the Upper Mississippi River refuges and inform elected officials about Refuge issues. Three volunteers of the Savanna District have donated 200-plus hours in the organization of the Friends Group. **11/97**

Final Water Level Goals Set for Finger Lakes

Upper Mississippi National Wildlife and Fish Refuge

A six-year multi-agency study was concluded in November 1997 providing the Winona District with target flow rates for the water control structures on Clear, First, Second, and Third Lakes located in Pool Five of the Mississippi River. Management of the new water control structures, built under the Environmental Management Program, is expected to improve winter fish distribution and survival in the Finger Lakes, a major backwater area. **11/97**

Riecks Lake Observation Deck Draws Visitors

Upper Mississippi National Wildlife and Fish Refuge

During the fall of 1997, more than 14,000 visitors from 40 states and 20 foreign countries visited the Riecks Lake observation deck near Alma, Wisconsin, to observe tundra swans, Canada geese and other waterfowl. A cadre of Refuge volunteers with the Alma Swan Watch hosted the platform, answering questions and providing interpretive material. **11/97**

Cache River Field Outing Attracts Hundreds

Cypress Creek National Wildlife Refuge

The Illinois Geological Survey sponsored the field outing in the Cache River Watershed. The Refuge and other Joint Venture partners coordinated tour spots. The program was part of an annual schedule of trips in Illinois that highlight geology, landscape, and natural resources. The trip in the Cache River Wetlands attracted 250 individuals of all ages. The all-day trip was a car caravan tour of the diverse bald cypress and tupelo gum swamps, bottomland forests, and rolling uplands surrounding the Cache River. Participants were from Wisconsin, Illinois, Missouri, Kentucky, and Indiana. Staff discussed geological, biological, and historical significance of the area. **11/97**

National Wildlife Refuge Week Open House Celebration

Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge celebrated National Wildlife Refuge Week and Agassiz's 60th anniversary with an open house at the Refuge October 12, 1997. Food and refreshments were served. Videos on waterfowl and moose were shown continuously. Despite cold and windy weather, the open house was considered a success. Open house was celebrated to give national wildlife refuges more recognition and to educate the public on natural resources. **10/97**

Millions of Fish Produced at Chautauqua Refuge

Illinois River Refuges

As part of an ongoing Environmental Management Program project, fisheries biologists with the Long-Term Resource Monitoring Program (LTRM) sampled the Wasenza Pool to estimate fish production on this 2,000-acre unit of Chautauqua National Wildlife Refuge. Using both small mesh hoop nets and plankton nets, LTRM personnel were able to estimate numbers of fish escaping the pool and entering the Illinois River system. Fish production in and subsequent escapement from the Wasenza Pool was estimated to range from 18 million to 27 million fish, depending on sampling method. Thirty-four taxa of fish were captured with shad, minnows, and suckers the most abundant. Game fish species such as white bass, bluegill, catfish, and crappie were also documented leaving the pool. **11/97**

Biking, Hiking Part of National Wildlife Refuge Week on the Cache River

Cypress Creek National Wildlife Refuge

In celebration of National Wildlife Refuge Week, Cypress Creek National Wildlife Refuge, Joint Venture Partners, and Hostelling International sponsored a three-day event with the Cache River Watershed. Participants took part in bicycling through the Refuge and surrounding area, canoeing on the Cache during peak fall colors, and hiking along upland bluffs of the Cache River State Natural Area. Multiple bicycle routes were available for riders ranging from 25 to 100 miles. Due to the success of this event, it will take place annually and will originate from the Refuge Office in Ulin, Illinois, in 1998. **10/97**

***...stabilized 250 feet of shoreline
on an island in Polander Lake
near Winona, Minn.
- Upper Mississippi River
NWR Accomplishment***

Teachers Explore Cache River Wetlands

Cypress Creek National Wildlife Refuge

Forty teachers from schools in the Cache River Wetlands participated in guided outings. The guided trips provided teachers an opportunity to explore ancient cypress/tupelo swamps and learn about resource issues, native wildlife/habitat and educational resources available through the Cache River Wetlands Joint Venture partners. Staff led hikes to Heron Pond which highlighted floodplain forest along the Cache and a pure stand of bald cypress trees over 300 years old. Participants also explored the swamp by canoe to view the 1,000 year old state champion bald cypress, Eagle Pond, and wetland wildlife and habitat. **10/97**

Horicon Refuge Staff Bands 431 Mallards

Horicon National Wildlife Refuge

Horicon National Wildlife Refuge and Leopold Wetland Management District staff banded 431 mallards. The Refuge quota is 400 mallards. Many volunteers, including the Wisconsin Conservation Corps, assisted in this project, contributing over 100 hours to the project. **10/97**

New Staff at Horicon Refuge for Visitor Center

Horicon National Wildlife Refuge

Five employees were added to the Refuge staff. Their main job is staffing the visitor center on busy weekends during the fall. With their help, and help of volunteers, the visitor center has been open every weekend during the fall. Over 1,000 people on a typical fall day are now able to visit with staff, ask questions, view the exhibits, enjoy the deck and spotting scopes, and spend money at Coot's Corner. **10/97**

Horicon Marsh Refuge Named Globally Important Bird Area

Horicon National Wildlife Refuge

Horicon National Wildlife Refuge staff were notified on October 1, 1997, that the Horicon Marsh was accepted as a Globally Important Bird Area in American Bird Conservancy's United States Important Bird Areas program. This nomination was a cooperative effort with the Department of Natural Resources, which manages the southern one-third of the Horicon Marsh. The marsh was accepted for this recognition for several reasons, one being that more than 30 percent of the Mississippi Flyway Canada geese migrate through the marsh during the fall, and approximately two - percent of the

bio-geographic population of mallards migrate through during the fall with impressive numbers of other waterfowl. **10/97**

Refuge Boundary Gets New Trees

Upper Mississippi River National Wildlife and Fish Refuge

Encroachments along the Refuge boundary at Peterson Lake Mowing and tree cutting over the years has resulted in loss of vegetation along the Upper Mississippi National Wildlife Refuge boundary at Peterson Lake. Some trees have also been lost to disease and age. This loss of vegetation has caused breaks in the natural screening of private homes from visitors using the river. A variety of tree and shrub species were planted in an attempt to reclaim these border areas. **4/98**

Lead Poisoning Causes Bald Eagle Death

Mark Twain National Wildlife Refuge

Forensic examiners at the U.S. Geological Survey Health Lab in Madison, Wis., determined that a bald eagle found dead in January 1998, died from lead poisoning after it ingested shotgun pellets. The bird was found dead in Henry County, Iowa, and turned over to Iowa Conservation Officer Les Nieland. Nieland brought the eagle to the Mark Twain National Wildlife Refuge, Wapello District Office, which forwarded it to the Madison lab. The results of the examination, released in May, determined the eagle ingested lead shot and died of lead poisoning. A news release was issued to 17 local radio and newspapers. **4/98**

Horicon Refuge Celebrates Earth Day

Horicon National Wildlife Refuge

Horicon National Wildlife Refuge celebrated Earth Day via participation in four different events on the marsh and in the local community. About 300 people attended the events, which involved more than five partners. Events included opening Old Marsh Road for hiking and biking, April 18, 19; opening the Visitor Center, April 18; dedicating and opening the new Bud Cook Hiking Area, April 22; and providing materials and guided activities for the Beaver Dam Ecumenical Group's Earth Day Service, April 26. Media coverage and community interest was excellent throughout. **4/98**

Wapello District's Burning Season Totals 330 Acres

Mark Twain National Wildlife Refuge

During April, the District staff of the Mark Twain National Wildlife Refuge enhanced 330 acres of native prairie plant species through prescribed burning. In an attempt to help the prairie plant species compete with the non-native and undesirable species, burns were conducted at the Louisa and Horseshoe Bend divisions of the District. Initially, 1,330 acres were scheduled to be burned; however, moist conditions restricted activities to 330 acres. **4/98**

Volunteers Cleanup Trempealeau National Wildlife Refuge

Trempealeau National Wildlife Refuge

Seven volunteers from a Calgary of God Church in LaCrosse, Wis., worked on the Refuge on April 25, 1998, replacing signs and sign posts, painting, picking up litter, mowing grass, planting grass seed, and washing vehicles. The improvements to the Refuge will enhance the experience of the visiting public. **4/98**

Friends Group Landscapes Around New Refuge Office

Trempealeau National Wildlife Refuge

On April 25, 1998, the Bob Pohl Chapter of the Upper Mississippi River Refuges Friends group landscaped the area around the new office at Trempealeau Refuge. They seeded about a half acre into native grasses and wildflowers and planted wild plum and choke berry around some of the structures needed for facility operation. They also helped place stone around the building that will act as a fire break when burning the grasses. **4/98**

Necedah National Wildlife Refuge Prescribe Burns 3,716 Acres

Necedah National Wildlife Refuge

Necedah burned 15 units, or 3,716 acres, during April. The station-sponsored Wisconsin Conservation Corps assisted in two of the burns. Two newly restored Barrens areas totaling 242 acres were part of the burn accomplishments. Four individuals from the Wisconsin Department of Natural Resources, Sandhill Unit, also helped for a day. **4/98**

Necedah Assists Washington Migratory Bird Office With Woodcock Survey

Necedah National Wildlife Refuge

Refuge Operations Specialist Trudeau participated in the national woodcock singing ground surveys on April 30, 1998. Four woodcock were heard along route 79 near big Flats in Adams County, Wis. **4/98**

Thousands of Prairie Forbs Planted on Mississippi Island

Upper Mississippi National Wildlife and Fish Refuge

District and headquarters staff joined forces with the Friends of the Mississippi and other volunteers to plant several thousand prairie forbs on sand disposal sites on Mississippi River islands that had previously been reclaimed with fires and planted to native warm season grasses as a part of the EMP program. Forbs were planted on Crats Island, Buffalo County, Wis., Grand Encampment Island and Finger Lakes disposal site, Wabasha County, Minn. In addition, several hundred forbs were planted on the Lofgren tract, Wabasha County, a recently donated tract. **5/98**

New Parking Area Constructed on Winona District

Upper Mississippi National Wildlife and Fish Refuge

A five-space parking area was constructed by district staff on the Przbylski tract, a newly acquired tract that provides access to Upper Mississippi and Trempealeau National Wildlife Refuge lands. The site provides a safe parking area for visitors using the refuges. The site was graveled and a boundary of eight-foot by eight-foot barrier posts defines the lot. Several loads of black dirt were hauled in and spread on the outside border of the lot. Finally, the black dirt was seeded and a variety of tree and shrub species were planted. **5/98**

University Plants Trees on Trempealeau National Wildlife Refuge

Trempealeau National Wildlife Refuge

Trempealeau Refuge partnered with the University of Wisconsin - Eau Claire to provide a service-learning project for 13 students. The students learned about the refuge system mission and the management and public use programs occurring at the Refuge. In exchange, the students planted 375 tree seedlings provided by the National Tree Trust in an area the Refuge is returning to bottomland hardwoods. **5/98**

Student "Job Shadows" Visit Wapello District Staff at Mark Twain Refuge

Mark Twain National Wildlife Refuge

On May 4, 1998, two Waco Jr. High School students job shadowed Wapello District staff of the Mark Twain National Wildlife Refuge. The students were exposed to an orientation on the National Wildlife Refuge system and careers in the Service. They also participated in moist soil management at the Louisa Division and tree planting, wetland restoration, native prairie restoration at the Horseshoe Bend Division. **5/98**

Prairie Shoreline Stabilized on Polander Lake Island

Upper Mississippi National Wildlife and Fish Refuge

Winona District and Headquarters staff spent a day on the Mississippi River stabilizing 250 feet of shoreline on an island in Polander Lake near Winona, Minn. A portion of the island that was a former sand disposal area had been planted to native warm season grasses as a part of the Polander Lake Habitat Rehabilitation Project. The shoreline suffered severe erosion during 1997 spring flooding. Staff staked and wired coconut fiber logs along the shoreline and planted over 2,000 willow cuttings on the shoreline side of the logs. In addition, the group planted several hundred prairie forbs in the prairie. **5/98**

Beetles Released to Control Purple Loosestrife

Horicon National Wildlife Refuge

The last of the wintering Galerucella beetles were released into the new rearing screen tent on May 6, 1998. An estimated 750 beetles wintered outside in last year's rearing pots and 608 beetles wintered in a refrigerator. Several partners were involved in potting up the 170 pots of purple loosestrife needed to rear the beetles. Beetles reared in 1998 will be released at several sites on Horicon National Wildlife Refuge, on the Wisconsin DNR end of the marsh, and on the Rock River by the Waupun High School to control the spread of purple loosestrife in Horicon Marsh. **5/98**

Horicon National Wildlife Refuge Celebrates International Migratory Bird Day

Horicon National Wildlife Refuge

Horicon National Wildlife Refuge celebrated International Migratory Bird Day via participation in several events of the Horicon Marsh Bird Festival, May 8, 9, and 10, 1998. About 2,000 people attended the weekend activities, and several partners were involved in this collaborative effort. Refuge events included release of trumpeter swans back to the marsh (a media event,) a reception for local winners of the Wisconsin Federal Jr. Duck Stamp contest, guided bird hike, "Wild Things" activities for kids at the Environmental Education Barn, and having the Visitor Center open for the weekend. **5/98**

Wisconsin Waterfowl Association Distributes Seed at Necedah National Wildlife Refuge

Necedah National Wildlife Refuge

Members of the public ordered various types of wildlife food and cover crop seeds - 253 bags of corn, sunflower, sorghum, and sudan seed, totaling 11,375 pounds. The seed was transported to the Necedah National Wildlife Refuge, where Wisconsin Waterfowl Association volunteers distributed it to the public May 7-9, 1998. **5/98**

Refuge Hosts Winona County, Minnesota, International Migratory Bird Day

Upper Mississippi National Wildlife and Fish Refuge

The Whitewater Watershed was one of the featured destinations for Winona County's North American Bird Count on May 9, 1998, organized by the Service in cooperation with the Hiawatha Valley Audubon Club of Winona. With a few exceptions, the usual species were represented, but total numbers of birds observed were down from previous years, and this result seems to be consistent with reports from other areas -- additional information would be welcome. **5/98**

Penny Hoesser Named Volunteer of the Year at Trempealeau

Trempealeau National Wildlife Refuge

Penny Hoesser was named Trempealeau Refuge's Volunteer of the Year for 1997. Penny contributed 360 hours during the year in various activities including staffing the observation deck, coordinating volunteers for the deck, leading school groups, collecting native grass seeds, and collecting breeding bird information on the Refuge for Wisconsin's atlas. Penny's enthusiasm for the refuge is contagious. She has recruited many volunteers while talking to visitors and has enhanced the refuge experience of many by opening eyes to the variety of plants and animals around them. **5/98**

Necedah National Wildlife Refuge Celebrates International Migratory Bird Week

Necedah National Wildlife Refuge

Refuge staff and volunteers coordinated 44 programs, reaching 2,477 students in 24 schools.. The volunteers contributed 12 hours. The presentations centered around the migration theme, including migratory birds, flights, and habitat needs. **5/98**

Ecosystem Team Tours Halfway Creek Watershed

Upper Mississippi River National Wildlife and Fish Refuge

The LaCrosse District continues to participate in the planning and implementation of the Halfway Creek/Sand Creek partnership. A briefing and tour were facilitated by LaCrosse District Manager Jim Nissen. The briefing and tour were held for Region 3 Assistant Regional Director John Blankenship, Refuge Manager Jim Fisher, Field Supervisor Lynn Lewis and Twin Cities Field Office Biologist Dave Warburton, along with local and state officials and citizens. **5/98**

Wapello District Hosts Bike Ride

Mark Twain National Wildlife Refuge

On May 17, 1998, the Wapello District hosted an organized bike ride around the perimeter of the Louisa Division. Louisa County Conservation Board Naturalist, Julie Ohde, assisted with coordinating the event. Approximately 25 people attended the event. A Wapello District staff member was posted as an interpreter at the Refuge overlook located on the Division. Spotting scopes were set up for participants viewing use. **5/98**

Four Trumpeter Swans Released at Necedah National Wildlife Refuge

Necedah National Wildlife Refuge

Necedah National Wildlife Refuge staff recently released four state endangered trumpeter swans on Rynearson Pool 2. The joint effort between the U.S. Fish and Wildlife Service and Wisconsin Department of Natural Resources aims to reestablish 20 nesting pairs of swans in Wisconsin. The program is in its final year of the 10-year reintroduction plan. Eggs were obtained from wild nests in Alaska, hatched in the Milwaukee Zoo, and the cygnets were raised at the General Electric Medical Systems Facility in Pewaukee, Wis. The release was attended by a newspaper reporter and the general public. Three media contacts and 11 news releases were sent out. **5/98**

Wapello District Staff Hosts 120 Students at Mercer County Field Day

Mark Twain National Wildlife Refuge

On May 19, 1998, staff from the Wapello District of the Mark Twain National Wildlife Refuge gave a presentation on native prairies to 120 fifth-graders at the Mercer County Field Day in Illinois. The Field Day is an annual event sponsored by the Mercer County Natural Resource Conservation Service. **5/98**

Necedah Sixth-Graders Visit Refuge

Necedah National Wildlife Refuge

Clerk Rabuck presented programs to 49 sixth-grade students and four chaperones and teachers on May 19, 1998. The class visited the Necedah National Wildlife Refuge after classroom studies in food chains, communities and populations. While at the Necedah National Wildlife Refuge, the students participated in activities that reinforced the concepts covered in class as well as activities that expanded on those topics. **5/98**

For the first time in more than two years, three pairs of bald eagles are again incubating eggs on the Crab Orchard National Wildlife Refuge.

-Refuge Accomplishment

Minnesota - Upper Iowa River Watershed Partnership Launched

Upper Mississippi River National Wildlife and Fish Refuge

An interagency meeting was held May 19, 1998, at Lake Louise State Park, near LeRoy, Minn., to discuss baseline information that is available or needed to support a recently formed citizens' effort to protect and restore the watershed of the Upper Iowa River. The Mower County Soil and Water Conservation District has hired a Geographic Information Systems specialist to assist on the project, and she has already produced a variety of base maps and analytical maps combining various data sets available "off-the-shelf" from several sources, including National Wetland Inventory maps available from the U.S. Fish and Wildlife Service. The Natural Resources Conservation Service and Soil and Water Conservation District staffs from the Cresco, Iowa, field office will be invited to the next meeting. **5/98**

Fifth-Graders Tour Mark Twain National Wildlife Refuge

Mark Twain National Wildlife Refuge

As part of the Louisa County Conservation Board Historical Field trip, 17 enthusiastic fifth-graders from Morning Sun School visited the Wapello District of the Mark Twain National Wildlife Refuge on May 20, 1998. Due to thunderstorms, the children occupied the conference room where they learned about the Refuge, eagles, and other endangered and threatened species. **5/98**

Necedah National Wildlife Refuge Completes Eau Claire Wetland and Prairie Project

Necedah National Wildlife Refuge

The Service, Wisconsin Department of Natural Resources and private landowners are part of a joint effort to restore 3.5 acres of wetland and eight acres of native prairie in Eau Claire County. The Wisconsin DNR made initial landowner contacts and surveyed the restoration site. It also cleared construction area with Diggers Hotline and the state historical society. Service staff transported and operated equipment to construct a 90-foot dike that blocked an existing drainage ditch and restored hydrology to 3.5 acres of wetland. The two landowners were involved in the restoration under Wildlife Management Agreements with the Service. The upland area (8 acres) adjacent to the restoration site was seeded with native prairie grass under a

cooperative agreement between the landowners and Natural Resources Conservation Service. **5/98**

Necedah National Wildlife Refuge Celebrates National Fishing Week

Necedah National Wildlife Refuge

National Fishing Week celebration on the Necedah National Wildlife Refuge was held beginning at 9 a.m. May 30, 1998, with a children's casting contest. A presentation of electro fishing and other research tools was given by Val Hyde from the Service's LaCrosse Fishery Resource Office. Free lunch was donated by area businesses. After lunch, a seminar on muskie fishing was given by a Refuge volunteer targeting adults and a fish adaptation program targeting children was given by Refuge staff. Door prizes and the casting and fish art prizes were all donated by area sporting goods shops. This will be an annual event. Eight media releases were sent prior to the event. **5/98**

West Salem Elementary Students Visit Trempealeau National Wildlife Refuge

Trempealeau National Wildlife Refuge

Three hundred eighty students from West Salem Elementary visited the Refuge during four days in May to learn about the Refuge, its mission, habitats, and wildlife. Refuge staff and volunteers taught the students about birds, mammals, aquatic invertebrates, and reptiles and amphibians. **5/98**

Upper Mississippi Refuge Helps Plant 200 Acres to Native Grasses

Upper Mississippi River National Wildlife and Fish Refuge

District staff cooperated with Natural Resources Conservation Service to plant native warm season grasses and forbs on 200 acres of Conservation Reserve Program and private lands during spring 1998. Winona District provided a tractor, dump truck with trailer and a maintenance worker, Steve Erickson, to complete the seedings. A Truax No-Till Drill that was acquired with Challenge Grant funds in 1997 was used to seed the sites. Trempealeau National Wildlife Refuge and LaCrosse Districts provided staff to help Erickson with seedings in their counties. In addition, they helped with travel costs for Erickson and with fuel for the tractor and dump truck. **6/98**

Whitewater Watershed Plan Approved and Funded

Upper Mississippi River National Wildlife and Fish Refuge

On President's Day, February 16, 1998, Congressman Gil Gutknecht chaired the signing ceremony of the Whitewater Watershed Integrated Management Plan, under U.S. Department of Agriculture's PL 566 program and the Environmental Protection Agency's PCA- funded Clean Water Partnership. About \$1 million annually will be provided for soil, water, fish and wildlife conservation over the next five years. **6/98**

Horicon Refuge Celebrates National Fishing Week

Horicon National Wildlife Refuge

Horicon National Wildlife Refuge hosted another successful fishing clinic in celebration of National Fishing Week. More than 130-third, fourth, and fifth-graders, parents and teachers participated from Marysville Wis. Middle School and St. John's Lutheran School in 10 Pathways to Fishing learning stations and an afternoon of fishing on the marsh. Marysville Mayor Richard Gudex signed a proclamation and addressed the youth. The Marysville News covered the event locally. **6/98**

60 Acres of Louisa Division Treated to Halt Maple and Cottonwood Saplings

Mark Twain National Wildlife Refuge

On June 6, 1998, 60 acres of moist soil habitat on the Wapello District of the Mark Twain National Wildlife Refuge were treated with Garlon to control the invading maple and cottonwood saplings. The tree invasion has steadily increased following the floods in 1993. **6/98**

Necedah National Wildlife Refuge Attends ARK Workshop

Necedah National Wildlife Refuge

Refuge Operations Specialist Trudeau represented Necedah National Wildlife Refuge at the ARK workshop in LaCrosse, Wis. The purpose of the ARK program is to assist in establishing groups that will help build strong community support for national wildlife refuges, assist in outreach, volunteerism, education, and political activism. Each of the refuges represented gave an overview of their refuge, threats, conflicts, and issues that could be addressed through the ARK campaign. **6/98**

Upper Mississippi Refuge Hosts Fishing Day For Disabled Kids, Adults

Upper Mississippi River National Wildlife and Fish Refuge

Service staff from Refuge headquarters, Winona and LaCrosse Districts, Trempealeau National Wildlife Refuge, Regional Sign Center and Fisheries Resources joined forces with a group of partners to provide a day of fishing for 50 children and 30 adults with disabilities.

Partners donated \$2,500 of fishing equipment and food to help make the day a success.

County Market and Econo Foods donated 100 new rods and reels which will be used for future Fishing Day events. In addition, County Market prepared the food that was donated by the Friends of the Upper Mississippi. Trout Unlimited sponsored 20 youths for a morning of fishing at a local trout pond. St. Mary's University donated the use of its pontoon boat. Several individual volunteers provided personal boats and their time to take kids fishing. The Friends groups served a lunch of hot dogs and sloppy joes with drinks donated by Coca Cola. **6/98**

Mississippi Conservation Video Wins First Place Award of \$4,000.00

Upper Mississippi National Wildlife and Fish Refuge

"The Mighty Mississippi - A Balance of Integrity," an educational video produced by the Upper Mississippi River Conservation Committee, won a first prize of \$4,000 in the recent Academy of Science of St. Louis' Mississippi River Multimedia Climate Competition. The video was cited for being a well-planned, high-quality production that conveyed a clear message about the need for conservation of the river's natural and recreational resources. The video was produced as a collaborative effort by natural resource professionals, state natural resource agencies and UMRCC Coordinator Jon Duyvejonck. The competition was held in conjunction with the 1998 Mississippi River Climate Conference. **6/98**

Native Grass Seeding at Horicon National Wildlife Refuge

Horicon National Wildlife Refuge

Horicon National Wildlife Refuge staff recently completed planting about 30 acres of Refuge uplands to native grasses and forbs. For the second year, the Wisconsin Department of Natural Resources contributed \$2,500 worth of native grass seed and forbs as part of the Challenge Grant program. In addition, assistance was provided by Leopold Wetland Management District. **6/98**

4-H Club Visits Necedah National Wildlife Refuge

Necedah National Wildlife Refuge

A 4-H club from the Black River Falls, Wis., area visited the Necedah National Wildlife Refuge on June 12, 1998. The 11 members, aged 2-14, and three leaders were given a 90 minute program on migration, its hazards and how seasonal migration can impact endangered animal populations, i.e. whooping cranes. The club was also treated to a short demo of a live gravid massasauga rattlesnake by Biologist King. **6/98**

75 Acres of Prairie Enhanced on Horseshoe Bend

Mark Twain National Wildlife Refuge

By June 15, 1998, approximately 75 acres of native prairie on the Horseshoe Bend Division of the Wapello District of Mark Twain National Wildlife Refuge was enhanced through properly timed mowing. The mowing was primarily completed through the assistance of Service certified volunteers. **6/98**

15 Acres of Prairie Restored at Horseshoe Bend

Mark Twain National Wildlife Refuge

On June 20, 1998, 15 acres of native prairie were planted by Wapello District staff of the Mark Twain National Wildlife Refuge on the Horseshoe Bend Division. The planting was made possible through the assistance of Louisa County Conservation Board's drill. **6/98**

Rice County Waterfowl Production Area Tract Approved

Minnesota Valley National Wildlife Refuge

The 96.5 acre Waterfowl Production Area (WPA) will be managed by Minnesota Valley National Wildlife Refuge. The purchase was approved by the Rice County Commissioners and subsequently by the State Land Exchange

Board. The WPA is adjacent to a 184-acre Robert Lick Wildlife Management Area, south of Lonsdale, Minn. The WPA will provide critical nesting habitat for migratory waterfowl and many other species of song birds. **6/98**

115 Acres of Upland Enhanced at Horseshoe Bend

Mark Twain National Wildlife Refuge

Wapello District staff and volunteers enhanced 115 acres of upland habitat on the Horseshoe Bend Division of the Mark Twain National Wildlife Refuge. One hundred acres were mowed to control various thistle species, and 15 acres of milo were planted to prep a fallow field infested with pest plant species. Next year, the milo field will be planted to native prairie. **7/98**

Horicon National Wildlife Refuge Hosts Wetlands Workshop

Mark Twain National Wildlife Refuge

Horicon National Wildlife Refuge staff and volunteers hosted a Marsh Madness Wetlands Workshop in partnership with the Wisconsin Department of Natural Resources on July 16, 1998. Refuge staff provided hands-on activities and information on available resources at the marsh, including field trips sites, videos, trunks, and educational programs. Many positive comments were received about the workshop. **7/98**

Refuge Releases Beetles to Control Purple Loosestrife

Horicon National Wildlife Refuge

Approximately 30,000 Galerucella beetles have been released on Horicon Marsh. The beetles were reared by Refuge staff from about 1,500 overwintered beetles. The Wisconsin Department of Natural Resources were given 8,500 beetles for release at the state end of the marsh. The remainder of the beetles were released at three sites on the federal end of the marsh. Collection of beetles started June 26, 1998 and ended July 16, 1998. **7/98**

Michael Creek Restoration Completed

Mark Twain National Wildlife Refuge

Following the completion of the Michael Creek restoration project, six acres of native prairie were seeded by Wapello District staff. The prairie provides bank stabilization and upland restoration. **7/98**

Beetles Released For Biological Control of Purple Loosestrife

Upper Mississippi River National Wildlife and Fish Refuge

This is the third year that the Galerucella beetles have been released in the Spring Lake unit of the Refuge. On July 21, 1998, 4,000 beetles were released that were obtained from the Illinois Department of Natural Resources. To date, we have not seen significant impact to the purple loosestrife at this site, but the beetles are overwintering and are present at the previous release sites. There is a site south of Savanna, on railroad property, that releases have been made for several years. The beetles are attacking that area, however the long term results are still unknown. **7/98**

Necedah National Wildlife Refuge Restores 2000-Acre Flowage/Sedge Marsh

Necedah National Wildlife Refuge

The 2,000-acre flowage and sedge meadow peat marsh belonging to the Service was restored recently by members of the Wisconsin Department of Natural Resources and Necedah National Wildlife Refuge. Necedah's Harold Carter performed the work with the Refuge's excavator in a little over three days. A 60-foot control structure was placed, and 1,805 feet of dike was re-sloped. The dike was also rip-rapped. The Wisconsin Department of Natural Resources provided rip-rap, fill materials, and the control structure. The work was done on federal lands under management by the Wisconsin Department of Natural Resources under a cooperative agreement. **7/98**

Service Joins Dedication of American Heritage Rivers

Upper Mississippi River National Wildlife and Fish Refuge

Savanna District Manager Ed Britton joined James Witt, director of Federal Emergency Management Agency at a ceremony July 30, 1998, to designate a portion of the upper Mississippi River as an American Heritage River. The dedication was held at Eagle Point in Dubuque, Iowa. The park overlooks the Upper Mississippi River National Wildlife and Fish Refuge. ABC's "Good Morning America" and three local television stations covered the event. **7/98**

Record Number of Shorebird Species Observed at Hamden Slough Refuge

Hamden Slough National Wildlife Refuge

A record number of 18 shorebird species were observed on Hamden Slough National Wildlife Refuge during the last week of July. This record count was the result of excellent birding by the Minnesota Ornithological Union, drawdown of large refuge pools and the migration of arctic nesting birds. Park Ranger Betsy Beneke, Tamarac National Wildlife Refuge, observed a shorebird buildup at Hamden Slough early in the week and notified Minnesota Ornithological Union members. The editor of the Union's *The Loon*, Tony Hertz, spotted 16 species, including a stilt sandpiper, dowitchers, and phalaropes, on July 30, 1998. Stilt sandpipers had not been previously documented on the Refuge. The refuge staff also observed marbled godwits and a lesser golden-plover, during the week. **7/98**

Endangered Weed Changes Prison Construction Plans at Savanna Army Depot

Upper Mississippi River National Wildlife and Fish Refuge

The James clammyweed, an Illinois endangered species, has halted plans to construct a \$98 million maximum security prison at Savanna Army Depot. The depot is undergoing base closure and 9,445 acres are identified for transfer to the Service. The prison would have been located adjacent Service land. Governor Jim Edgar reconsidered his decision to locate the prison on the Depot after two of his own commissions (Endangered Species board and Natural History Survey) and several conservation organizations complained and a lawsuit was filed by the Environmental Law and Policy, Inc. of Chicago. **8/98**

Two Complete Private Industry Council Program at Necedah National Wildlife Refuge

Necedah National Wildlife Refuge

Two young students, Chad Faulkner and Diane Drescher, were placed at Necedah National Wildlife Refuge for seven weeks by the Juneau County, Wis., Private Industry Council. Chad's duties were general lawn care, minor cleanup, and scraping and painting building exteriors. Diane provided general office assistance. In addition to the training provided by the Council, Necedah provided specific on-the-job and safety training to the students. The students were supervised by Refuge Operations Specialist Trudeau and Admin Technician Rochester. This is the third year Necedah National Wildlife Refuge has provided a work site for the program in Juneau County. The students get a chance to learn job and personal skills and the Refuge is able to accomplish needed work for only the cost of supervision and project work supplies. **8/98**

Necedah Refuge Staffer Interviewed on Karner Blue Butterfly Flights

Necedah National Wildlife Refuge

Refuge Clerk Jennifer Rabuck was interviewed by a reporter from the Portage News Service. The interview was the result of a Refuge-generated news release concerning the second flight of the Karner blue butterfly which was sent to 20 members of the media. The interview concerned the butterfly's habitat, why the species is in trouble, and public viewing locations on the Refuge. The story was also covered by the Portage Daily Register. Other towns called the Refuge for further details and information. **8/98**

55 Acres of Wetland Restored on Horseshoe Bend

Mark Twain National Wildlife Refuge

Three wetland restorations, totaling 55 acres, were completed on the Horseshoe Bend Division of Mark Twain National Wildlife Refuge. Projects include: the construction of two rock spillways on Iowa Pool Restoration (10 acres), construction of a low-level dike and placement of a water control structure on Volunteer Slough Restoration (35 acres), and the repair of Rush Lake Restoration spillway, which enhanced 10 acres of the original basin. The projects were designed by District staff, and constructed by contractors. **8/98**

Refuge Staff Construct Low-Water Crossing

Mark Twain National Wildlife Refuge

On August 28, 1998, a low-water equipment crossing was constructed, through force account, by Wapello and Annada District staff, to enhance farming and moist soil management on the Louisa Division of the Mark Twain National Wildlife Refuge. **8/98**

Refuge Boat Ramps Repaired

Mark Twain National Wildlife Refuge

On September 15, 1998, several minor repairs were made to the Big Timber Division and the Keithsburg Division boat ramps. Cracks in the ramps were filled with gravel and gravel was placed along the edges of the ramps. The Keithsburg ramp was repaired through the assistance of the City of Keithsburg, which lent us a front end loader, and a recently recruited volunteer, who also works for the Keithsburg Road Department. **9/98**

Refuge Visitor Center's Art Gallery Draws New Audiences

Minnesota Valley National Wildlife Refuge

Art is an important avenue to create a sense of stewardship and awareness of the natural environment and the mission of the Service. The artists exhibiting at the Minnesota Valley National Wildlife Refuge Gallery have brought an entire new audience to the visitor center. Many hosted opening receptions which drew approximately 75-100 guests who had never visited the Refuge prior to this. We were successful in advertising the art exhibits in local newspapers, art newsletters, and through the Internet thus creating additional outreach efforts. The Gallery has developed a good image and reputation as evidenced by the fact that exhibits are booked through the year 2000. **9/98**

Necedah National Wildlife Refuge Hosts Scout Banding Day

Necedah National Wildlife Refuge

Twenty-five scouts and 15 adults attended the Necedah National Wildlife Refuge Scout Waterfowl Banding Day. With the help of three staff members and three Refuge volunteers, the group banded 87 mallards, one black duck, one pintail, 10 green wing teal and tallied an additional five recaptured birds. The attendees learned about aging and sexing ducks as well as identification skills and facts about current research and migration routes. **9/98**

Water Resources Investigated at Necedah National Wildlife Refuge

Necedah National Wildlife Refuge

The Necedah National Wildlife Refuge provides a variety of habitats that support a diverse assemblage of aquatic, terrestrial, and avian fauna. The environmental significance of these biotic resources and the value of the water that supports them is rapidly increasing as large tracts of the surrounding landscape in west-central Wisconsin are physically and chemically altered to support intensive agricultural production. Due to increasing agricultural demands for irrigation water in this region, a better understanding of the hydrologic budget components and operational water requirements at the Necedah National Wildlife Refuge is needed. Therefore, several Region 3 program offices pooled resources in Fiscal Year 1998, and entered into a cost-share partnership program with the Wisconsin District Office of the U.S. Geological Survey's Water Resources Division to initiate a comprehensive water resources investigation at the Necedah National Wildlife Refuge. U.S. Geological Survey staff installed a series of stream gauges, ground water monitoring wells, and precipitation gauges around the Refuge in spring 1998 to collect pertinent hydrologic data. The information will be used to quantify seasonal and annual fluxes of water into and out of the Refuge, as well as to model ground water-surface water interactions within the Refuge during 1998. Moreover, this data will serve as a record of past water use should it become necessary to litigate water rights for the Refuge in the future. Concurrent evaluations of water quality and surveys of aquatic fauna (invertebrates, fish) residing in major streams flowing in and out of the Refuge were also conducted by study cooperators in Fiscal Year 1998 to collect additional baseline data needed to evaluate future changes in Refuge water resources as development of the surrounding landscape continues. A reduced level of Service funding is needed for this cost-share program in Fiscal Year 1999 to complete processing and analysis of water quality, fish, and invertebrate samples, as well as to collect additional hydrologic data to complement that collected in 1998 (an El Nino-influenced year). **9/98**

Region 3 Resource Center Meets Demand for Information About Service

Minnesota Valley National Wildlife Refuge

The Resource Center, located at Minnesota Valley National Wildlife Refuge responded to more than a thousand requests for information from educators and the public about Region 3 activities and programs during this fiscal year. The Resource Center responded to 1,252 requests for materials. A total of 747 films and video were used. Service staff received 220 requests for the films and videos, 90 by state and county agencies throughout the region, and 426 by educators. The Resource Center shipped 139 educational kits, trunks and exhibits to 64 Service staff members and to 75 educators throughout the region. A total of 367 requests for brochures, Refuge information, slides, documents, and fact sheets were fulfilled. Of the 367 requests, 112 were from Service members, 100 requests were for resource catalogs and 155 requests were from the public and educators throughout the United States and several other countries. **9/98**

Levee Road Repaired and Parking Lot Constructed at Mark Twain Refuge

Mark Twain National Wildlife Refuge

During the month of September, on the Horseshoe Bend Division of the Mark Twain National Wildlife Refuge, the gravel levee road was reshaped and rocked and a 15-car parking lot was constructed. Both activities enhanced visitor safety. **9/98**

Loon Chicks Released at Refuge as Part of Experimental Program

Necedah National Wildlife Refuge

Six common loon chicks were released on the Necedah National Wildlife Refuge by biologists with the Upper Mississippi Science Center. The 12-13 week old chicks were hatched from eggs and raised in captivity in collaboration with the Wisconsin Department of Natural Resources. Loon productivity in northern Wisconsin lakes has shown a steady decline in recent years. The research helped to refine techniques for rearing loon chicks in captivity, obtain data on cause-specific mortality of loon chicks from hatch through fledging, explore effects of mercury exposure, and study the impact of radio transmitters on the chicks. Necedah National Wildlife Refuge is one of the southern-most nesting areas for the loons in Wisconsin. **9/98**

Minnesota Junior Duck Stamp Winner Places Second in National Contest

Minnesota Valley National Wildlife Refuge

Rebecca Latham won Best-of-State with her rendition of a pair of Redheads done in acrylic. Rebecca went on to take second place in the National Competition. A traveling exhibit consisting of 36 pieces of art representing the first, second, and third place winners is on display throughout Minnesota through December 1998. Entries were submitted to Minnesota Valley National Wildlife Refuge by March 15, 1998. The Awards ceremony was held on May 16, 1998, and approximately 450 guests attended. **9/98**

Refuge Education-Outreach Reaches 6,000 During September Events

Mark Twain National Wildlife Refuge

Staff members from Mark Twain National Wildlife Refuge-Annada District, participated in three environmental education-outreach events during September. The Pike County Soil & Water Conservation Days, held near Bowling Green, Ill., helped 300 students learn more about protecting our environment. A display and program on endangered species presented by Refuge staff raised many interesting questions by the students. More than 5,000 visitors stopped by the Service booth during the Big River Days weekend at Clarksville, Ill. Kids and adults enjoyed the Endangered Species trunk, which includes a zebra skin, elephant ivory and a 10-foot python skin. At Mark Twain Lake Environmental Education Day, 700 students enjoyed an endangered species presentation, along with the endangered species trunk. **9/98**

Winona District's Duck Identification Talks Part of Greenwing Jamboree

Upper Mississippi River National Wildlife and Fish Refuge

Staffers at Upper Mississippi River National Wildlife and Fish Refuge-Winona District, presented duck identification seminars to more than 240 youths at Winona, Minn., and Durand and Ettrick, Wis., September 19, 1998. The presentations were part of the "Greenwing" jamborees, sponsored by Ducks Unlimited, and focused around displays of mounted birds called "Ducks on a Stick." The displays consist of 30 mounted specimens of ducks and other water birds found in the upper Midwest. The displays were cost shared by the Service working in partnership with area conservation

organizations and Minnesota Department of Natural Resources. The "Ducks on a Stick" presentations coincided with Youth Waterfowl Day in Minnesota and were designed to help young hunters become more proficient at identifying waterfowl. Other partners in the event included Dodge Sportsmen Club and Alma Swan Watch. **9/98**

Cross Levee Repaired and Riser Installed On Refuge's Louisa Division

Mark Twain National Wildlife Refuge

On the Louisa Division of the Mark Twain National Wildlife Refuge, Wapello District staff installed a water control structure prior to the contracted finishing work of the Moist Soil Unit Number 15's cross levee. Construction was completed on the levee by September 24, 1998. District staff also seeded the levee with a waterway seed mixture which included red top grass seed. **9/98**

Pineland Elementary Visits Necedah National Wildlife Refuge

Necedah National Wildlife Refuge

Eighty-three Kindergarten through fifth grade students with 11 teachers and chaperones were given a day of educational activities on the Necedah National Wildlife Refuge. The students participated in hands-on learning sessions on waterfowl banding and various bird adaptations. The group was also given a program on predators and hiked a trail near the observation tower. Four Refuge staff members and four Refuge volunteers were on hand to lead the activities. **9/98**

Dike Constructed, Wetlands Restored in Chippewa County, Wisconsin

Necedah National Wildlife Refuge

The Service made the landowner contact and completed surveying for the project. The Service provided \$3,100 of Challenge cost share funding and labor to help complete this project. Wisconsin Department of Natural Resources provided \$1,400 in cost share funding and the landowner provided the balance of \$1,817 in funding and labor. When re-flooded, this project will result in about four acres of wetland. **9/98**

Winona District Cost-Shares Observation Deck at Reick's Lake, Wis.

Upper Mississippi River National Wildlife and Fish Refuge

A project to expand the popular observation deck at Reick's Lake at the Upper Mississippi River National Wildlife and Fish Refuge is currently underway thanks to funds from the Service's Challenge Grant Program and many Alma, Wis., area clubs, individuals and businesses. Last year, Refuge volunteers counted more than 14,000 people using the single platform primarily during the tundra swan migration in October and November. On peak use days, visitors often had to stand in line to access the platform and observe waterfowl. The current expansion work will more than double the viewing capacity of the facility for the public while still maintaining sloped ramps accessible to the physically disabled. Although the observation decks are located partly on the Upper Mississippi River National Wildlife and Fish Refuge, the City of Alma Recreation Committee is supervising construction and will share in the cost of site maintenance. This project is truly a major partnering effort! **9/98**

Service, Partners, Restore 10 acres of Wetlands in Chippewa County, Wisconsin

Necedah National Wildlife Refuge

Wisconsin Department of Natural Resources made initial landowner contact, acquired permits and provided \$2,000 of cost share funding. The Service completed surveying, supervised construction and provided \$2,100 in challenge cost share funding. The landowner provided \$1,900 in equipment time to the completion of the project resulting in 10 acres of restored wetlands. **9/98**

28 District Volunteers Contribute 550 Hours at Mark Twain National Wildlife Refuge

Mark Twain National Wildlife Refuge

During Fiscal Year 1998, 28 volunteers contributed 550 hours to the Wapello District of the Mark Twain National Wildlife Refuge. Major volunteer accomplishments include the construction of an accessible fishing pier, the planting of 200 acres of winter wheat and 25 acres of corn, and mowing 200 acres of invading tree saplings and 91 acres of native prairie. **9/98**

235 Acres Farmed on Louisa Division

Mark Twain National Wildlife Refuge

During Fiscal Year 1998, Wapello District staff with the assistance of two volunteers, farmed 200 acres of winter wheat and 35 acres of corn on the 2,609-acre Louisa Division of the Mark Twain National Wildlife Refuge. **9/98**

Children, Adults Participate In Environmental Education Activities

Mark Twain National Wildlife Refuge

Throughout September, Wapello District staff of Mark Twain National Wildlife Refuge participated in environmental education activities for 102 children and adults. Activities included a historical field trip for Wapello fifth-graders and a tour of the Louisa Division for Ducks Unlimited Green Wings youth chapter. **9/98**

Refuge Acorn Collection helps Watershed Reforestation

Cypress Creek National Wildlife Refuge

An annual acorn collection is held every October and November by the Cache River Wetlands Joint Venture (the Service, Illinois Department of Natural Resources and The Nature Conservancy). The collection takes place on state and Refuge property and provides an opportunity for volunteers of all ages to get involved with the reforestation effort in the Cache River watershed. The good/viable acorns are sorted and used to grow seedlings which will later be planted on Refuge property; some of the are also directly planted into the ground. **11/97**

Refuge Staff, Legislators Discuss Plans For Cache River Wetlands Center

Cypress Creek National Wildlife Refuge

Staff met with Illinois Department of Natural Resources planning staff and legislators to discuss plans for the Cache River Wetlands Center. Four million dollars has been included in Governor Jim Edgar's budget for the project. Final appropriation will be made in June 1998. **3/98**

New Refuge Office-Visitor Contact Area Opens at Trempealeau National Wildlife Refuge

Trempealeau National Wildlife Refuge

The new refuge office/visitor contact station was constructed between October 1997 and March 1998 by a private contractor. The new accessible facility is situated out of the flood plain; excellent views of the marsh and its wildlife provide a pleasant environment for the visitor in any weather. **3/98**

Minnesota Valley Refuge Acquires Two Waterfowl Production Areas

Minnesota Valley National Wildlife Refuge

Minnesota Valley National Wildlife Refuge acquired two Waterfowl Production Areas (WPA) totaling 178 acres in Blue Earth and Carver counties. The WPAs were purchased with funds from the North American Wetland Conservation Act. Both county commissioners approved the acquisitions without objections. The new Blue Earth County WPA is located adjacent to a State Wildlife Management Area and will create a 160 acre block of prairie wetland habitat. The second tract located in Carver county is adjacent to the existing Perbix WPA and will create a 213-acre tract of prairie wetland habitat. **4/98**

Great River Cleanup Day at Savanna District

Upper Mississippi River National Wildlife and Fish Refuge

The Service, Sabula, Iowa, RAGBRAI committee and Jackson County Conservation Board joined forces to clean up the road and shoreline along the Refuge boundary near Sabula, Iowa. Forty volunteers from Sabula participated in the massive cleanup. Five dump loads of garbage, two dump loads of metal and a load of tires were removed. **4/98**

Refuge Staff Assists With Stewardship Week

Cypress Creek National Wildlife Refuge

Stewardship Week was held April 21-28, 1998, to help celebrate Earth Day. Twelve learning stations were set up for students to rotate through during a day field trip. Throughout the day, Refuge staff presented 20 minute programs on wetlands to students in grades K-6. **4/98**

Necedah National Wildlife Refuge Participates in Ground Surveys

Necedah National Wildlife Refuge

Refuge staff completed waterfowl ground truthing surveys on transects 25 in northern Adams County and 66 in southern Juneau County. Ground truthing surveys are run in conjunction with aerial surveys run at the same time. **5/98**

Volunteer Appreciation Picnic Held at Trempealeau

Trempealeau National Wildlife Refuge

On May 12, 1998, Trempealeau National Wildlife Refuge held its volunteer appreciation picnic to recognize the contributions in the previous year. A total of 2,190 hours were contributed by 119 volunteers. Picnic activities included a baked chicken dinner and recognition awards, followed by a tour of the new office and birding until dusk. **5/98**

Rendezvous at Scandia Woods Environmental Learning Lab (SWELL)

Morris Wetland Management District

Approximately 600 Morris Area elementary students enjoyed a rendezvous at the Scandia Woods Environmental Learning Lab on May 14, 1998. Students experienced many of the daily activities that early settlers would have participated in. District staff gave eight presentations on trapping. **5/98**

Trempealeau National Wildlife Refuge Burns 30 Acres of Prairie Grasses

Trempealeau National Wildlife Refuge

Thirty acres of prairie grasses on the Refuge were burned along two diversion dikes and four restored prairie areas in April and May. The burns enhanced the growth of little blue stem, Indian grass, big bluestem, switchgrass, and other warm season grasses. **5/98**

Brussels District Hosts Migratory Bird Discovery Day in St. Louis

Mark Twain National Wildlife Refuge

The Brussels District of Mark Twain National Wildlife Refuge partnered with the Missouri Botanical Gardens, St. Louis Zoo, St. Louis Audubon Society and the Wild Bird Rehabilitation Center to present St. Louis' premier International Migratory Bird Day event on May 16, 1998. Activity and informational stations were set up at the Missouri Botanical Gardens in St. Louis. Everything from hands-on specimens to bird feeders, birding information, a live bird demonstration, and many kids' activities were included. Over 700 actively participated in the event, with several thousand persons walking through the displays. **5/98**

Savanna Celebrates Migratory Bird Day

Upper Mississippi River National Wildlife and Fish Refuge

Migratory Bird Day events included a bird walk and mist net demonstration at the Pleasant Creek Unit in Iowa. The public was able to view the heron rookery on the Sabula-Savanna causeway and a bald eagle nest on the Savanna Army Depot. Hawks, owls and eagle program, excellent home video and talk about neotropical birds and the presentation of photo contest awards were held at Savanna. Approximately 125 people attended the celebration. **5/98**

Water Quality and Quantity Issues of the Minnesota River

Morris Wetland Management District

On May 20, 1998, Ruth Ann Lee, a representative from Congressman David Minge's office, held a planning meeting at Canby, Minn. The meeting helped prepare for a conference which will address water quality and quantity issues of the Upper Minnesota River. The conference and public meeting are scheduled for July 1, 1998. The meeting consisted of decision and policy makers interested in water quality and quantity issues associated with river cleanup and public water supply needs. These meetings are to advance the plan of Minnesota River cleanup and learn what key players believe must be done in the watershed and on the river. **5/98**

Refuge Staff and Volunteers Assist with River Watch

Cypress Creek National Wildlife Refuge

Refuge staff and volunteers assisted Illinois RiverWatch Network with sampling five streams in the Cache River Watershed. Volunteers are trained to collect and identify macroinvertebrates. The data is managed by Illinois Department of Natural Resources and provides a general overview of water quality throughout the watershed. Cypress Creek National Wildlife Refuge and volunteers have been involved with the program for four years. This effort also complements the Refuge's effort to continue trend monitoring of the Cache River and associated wetlands and tributaries. **6/98**

Refuge Completes Second Year of Monitoring Cache River

Cypress Creek National Wildlife Refuge

The Service, with support from the National Fish & Wildlife Foundation, and the Cache River Wetlands Joint Venture in southern Illinois, initiated a long-term water quality monitoring project on the Cache River system. The project involves monitoring 13 sites along the Cache River. Monitoring includes turbidity, dissolved oxygen, conductivity, nutrient loading, pH content, flow velocity and biological sampling. The project provides a unique opportunity to document improvements of water quality (both abiotic and biotic factors) within the Cache River wetlands following landscape restoration efforts throughout the Refuge/watershed. Improvements in water quality of the Cache River and associated tributaries may well become the yardstick by which future large scale restoration/preservation is measured. **6/98**

Flea Beetles Collected, Released For Control of Leafy Spurge

Morris Wetland Management District

Donna Oglesby and Cory Bossert from Morris Wildlife Management District collected 115,000 *Aphthona Czwlonie/Aphthona lacertosa* (flea beetles) at Valley City, North Dakota. The beetles were collected at Bald Hill Dam in Barnes County June 30, 1998. A state permit was needed to collect out of state. The U.S. Department of Agriculture hosted the collection as part of its North Dakota Biological Control Program workshop. Beetles were released on nine sites at five Minnesota Wildlife Protection Areas at the Morris Wetland Management District. **6/98**

Minnesota Valley Seeds 192 Acres to Native Grasses

Minnesota Valley National Wildlife Refuge

Minnesota Valley National Wildlife Refuge staff, in partnership with several local conservation organizations, planted 192 acres to a mixture of native grasses on three Waterfowl Production Areas and one Private Lands project. The grassland consisted of a mixture of big bluestem, little bluestem, switchgrass, sideoats, Canada wild rye, and several forb species. The grasslands are adjacent to restored wetland basins. One of the WPA's was purchased with North American Wetland Conservation Act (NAWCA) dollars in partnership with Pheasants Forever. The plantings of these three WPA's completes the final phase of wetland and prairie restoration on these projects. **6/98**

Minnesota Valley Refuge Completes Prescribed Fire Season

Minnesota Valley National Wildlife Refuge

Minnesota Valley National Wildlife Refuge staff completed eleven prescribed burns on 1,100 acres on the Refuge. The prescribed burns are used to reinvigorate prairie grasses and set back succession on wetlands and grasslands. One of the burns was also used to continue our restoration of oak savanna on the Louisville Unit of the Refuge. The Refuge partnered with the Minnesota Department of Natural Resources on three Refuge burns and two prescribed fires on the Minnesota Valley State Park. **6/98**

Morris District Participates at Stevens County Extension Service Day Camp

Morris Wetland Management District

Chad Raitz and Kenton Moos from the Morris Wetlands Office gave a presentation on wetlands to five groups of 4-H kids from Morris, Hancock and Donnelly. Approximately 65 kids ages 6 to 12 participated. The Stevens County Extension Service held day camps for the 4-H groups in each of the three towns. The topics covered were wetlands, wildlife signs and adventure initiatives. **7/98**

Red River Watershed Meeting Discusses Role of Wetlands

Morris Wetland Management District

In an effort initiated by the Service and U.S. Geological Survey to address the true role wetlands have in flood situations, particularly in the Red River watershed, an effort to pull in

partners for a computer modeling study was done. The meeting was held May 27, 1998, in Fargo, North Dakota, with 30 people in attendance. This meeting was a candid presentation and discussion with potential partners about the proposal, what could be learned, who would benefit and how such a study could be funded. **7/98**

Necedah National Wildlife Refuge Restores Wetlands Under Challenge Grant

Necedah National Wildlife Refuge

On May 8, 1998, Kurt Tonn Excavating completed the Challenge grant project restoring nearly two acres of wetland habitat acres on the Don Steinke property in Eau Claire County, Wisconsin. The Service covered \$1,000 of the total project cost of \$5,500, with the Natural Resources Conservation Service and the landowner covering the remainder. **7/98**

Minnesota Envirothon Features Whitewater Watershed

Upper Mississippi River National Wildlife and Fish Refuge

The winning teams from over 20 regional Envirothon competitions converged on Whitewater State Park May 20, 1998, to determine which high school would represent Minnesota at the national competition in Lansing, Michigan, in August. Each team had to present an assessment and proposed restoration plan for a hypothetical watershed, before an interagency team of judges, including the Upper Mississippi River National Wildlife Refuge Watershed Biologist Tex Hawkins. The Southeast Minnesota Mabel-Canton School District won for the second time in three years. **7/98**

***...eleven prescribed burns on
1,100 acres of the Refuge.***

***Minnesota Valley NWR
Accomplishment***

Floodplain Wetland Restorations at Kickapoo Watershed

Upper Mississippi River National Wildlife and Fish Refuge

La Crosse District Manager Jim Nissen, Wisconsin Private Lands Coordinator Jim Ruwaldt and Upper Mississippi River Watershed Biologist Tex Hawkins met with state and local counterparts to review wetland restoration projects on flood plains in the Kickapoo Watershed. Shallow emergent marsh conditions have been effectively restored following historic lateral ditching, in an attempt to crop or pasture the area. New owners are more sympathetic to stream improvement for fish habitat or flood plain wetland restoration for aquatic plants, amphibians or waterfowl -- provided that some open water can be maintained for easy observation. Several sites are now being restored with Service assistance under a Private Lands Cooperative Agreement, administered by the Madison office, with technical assistance provided through LaCrosse District and Winona Headquarters Private Lands staff. All design work and construction oversight are provided by the Vernon County Land Conservation Department. **7/98**

Frog Survey conducted on Cypress Creek Refuge

Cypress Creek National Wildlife Refuge

The Refuge conducted a frog and toad survey for the 2nd year. The survey was conducted on a wetland site (moist soil unit) adjacent to the Cache River. The Refuge was contributing to a regional monitoring effort to document baseline external abnormality rates of frogs/toads on Service lands in an eight-state region. Refuge staff and 15 volunteers collected 149 frogs/toads that included southern leopard frogs, green tree frogs, cricket frogs, and fowler's toads (leopard frogs and cricket frogs made up the majority). No deformities were found. **7/98**

Refuge's Preschool Programming Growing in Popularity

Minnesota Valley National Wildlife Refuge

Since the preschool environmental education program began at Minnesota Valley National Wildlife Refuge in July of 1996, the number of programs presented have increased nearly 50 percent. Over the two years, 3,960 children and adults have participated in the preschool programming. Five different programs are offered. Topics include: migration, habitat, and squirrels. Children learn through hands on

education activities from story telling and making crafts to exploring the Refuge on foot. **8/98**

More Than 90 Black Tern Pairs Nesting on Trempealeau National Wildlife Refuge

Trempealeau National Wildlife Refuge

Over 90 pairs of black terns nested in Refuge wetlands in June and July. This was a substantial increase over previous years with 60 pairs nesting. During the black tern nest surveys, a least bittern nest was also found that successfully hatched young. **8/98**

Refuge Sponsors Cache River Wetlands Stewardship Saturdays

Cypress Creek National Wildlife Refuge

Stewardship Saturdays are sponsored by the Refuge with support from the Cache River Wetlands Joint Venture. The program provides volunteers the opportunity to assist Refuge staff with field projects that range from trail development and maintenance, site cleanup, reforestation and restoration work. Over a seven-month period, approximately 250 volunteers assisted Refuge staff on the third Saturday of each month. This effort provided staff with valuable labor and allowed local residents the opportunity to get involved with the Cache River Wetlands project. **8/98**

Educator's Guide to the Cache River Wetlands

Cypress Creek National Wildlife Refuge

The Educator's Guide to the Cache River Wetlands highlights hands-on field activities about wetlands, water quality, watershed issues, and wildlife habitat. Activities are geared for grades 6-12 and correlate with the Illinois Learning Standards. The guide will provide a needed resource for staff and the many educators that visit the site each year. Joint Venture staff will plan teacher workshops and distribute the guide through the regional superintendent of schools office. **8/98**

Mississippi Friends Group Launches 'Friend Per Mile' Initiative

Upper Mississippi River National Wildlife and Fish Refuge

The Dubuque, Iowa, chapter of the Friends of the Upper Mississippi River Refuge has launched a membership initiative to obtain a new member, or "friend," for each mile of the Upper Mississippi Refuge for a goal of 261 Friends. The Friends of the Upper Mississippi Refuges group has been in existence for about a year. The Friends group recently began forming separate chapters in cities and towns located along the 261-mile length of the Refuge. The newly founded Dubuque chapter has six members. This bold initiative is starting with outreach to local individuals, conservation organizations, and corporations. **8/98**

Refuge Cleans Newly Acquired House Sites

Cypress Creek National Wildlife Refuge

Since the Refuge has an active land acquisition program, cleanup work and site restoration is an ongoing process. Once property is acquired from willing sellers, Refuge staff remove buildings and restore old house sites to native habitat. This year, staff removed six houses and outbuildings, and filled six wells and sisterns within the Refuge boundary. **3/98**

Tunnel Hill Trail Dedicated Within the Cache River Wetlands Center

Cypress Creek National Wildlife Refuge

The Tunnel Hill Bike Trail is part of the "Rails to Trails" system and will tie into the Cache River Wetlands Center. Ten miles of the 40-mile trail were dedicated and opened to the public by Illinois Governor Jim Edgar. Funding totaling more than \$7 million has been dedicated by the State of Illinois to complete the trail and develop the Cache River Wetlands Center. **9/98**

Service Completes Big Creek Watershed Restoration Projects

Cypress Creek National Wildlife Refuge

The Service recently completed watershed restoration projects aimed at limiting increased sedimentation of Illinois' Buttonland Swamp - A national natural landmark. The project included angling the west bank of Big Creek at its mouth, and breaching the west side of Big Creek levee. Big Creek, a tributary of the Cache River, is a major contributor of sediment into Buttonland Swamp. The breach allows peak flows to overflow onto Cypress Creek National Wildlife

Refuge property. The angling of the bank allows flood water from Big Creek to move downstream, thereby reducing the congestion of water at the intersection of Big Creek and the Cache River. In the past, the force of Big Creek has caused the Cache River to flow backwards depositing silt in Buttonland Swamp.

9/98

Service and Partners Restore 500-Acre Wetland in Wisconsin

Wisconsin Private Lands Office

The Service, in cooperation with the Natural Resources Conservation Service's Wetlands Reserve Program, The Nature Conservancy and Wisconsin Waterfowl Association recently completed restoration of a 500 - acre drained wetland basin in Adams County, Wisconsin. The project is located on The Nature Conservancy's Quincy Bluff Nature Preserve. The property is a complex of oak savanna and wetlands. The restored wetland was drained by a ditch nearly 1.5 miles long. Project partners completely filled the ditch, restored natural contours to the area, and restored natural hydrology to the wetland.

9/98

Repairs Made to Flood Damage Sites on the Refuge

Cypress Creek National Wildlife Refuge

Special funding for damages caused by the Ohio River flood was put to very good use on the Refuge. Projects accomplished include 1,000 yards of levee repair, five miles of road repair and rock placement on two parking lots, replacement of rip rap along the Cache River, reforestation of 60 acres, and replacement of deteriorated boundary signs on the south end of the Refuge boundary. Funding also covered salaries for force account projects to repair flood damage. **9/98**

5,600 Acres Enrolled in Wetland Reserve Program in the Cache River Watershed

Cypress Creek National Wildlife Refuge
Staff from Cypress Creek National Wildlife Refuge, Natural Resources Conservation Service and Iowa Department of Natural Resources have enrolled 5,600 acres into permanent Wetland Reserve Program (WRP) easements. The easement acreage is on 23 different parcels owned by 18 landowners. The Special WRP requires a 25-percent match from partners, which has been in the form of restoration practices implemented on-site. The three-year project is valued at over \$6 million and includes restoration costs and agency contributions. The project aims to obtain 30-year or permanent easements on 6,000 acres in the Cache River Watershed. The program has been very beneficial to the Joint Venture partners and local landowners. Six additional applications are pending, awaiting on ranking and funding acceptance. **9/98**

Horicon National Wildlife Refuge Environmental Education Programs

Horicon National Wildlife Refuge
For the last quarter of the year (July through September), Horicon National Wildlife Refuge staff presented 25 environmental education programs to a variety of groups, mostly school and youth groups. Approximately 1,000 people attended the programs. One of the groups included 110 grade school kids from inner city Milwaukee, who enjoyed hiking for the first time in their lives and were excited to see grasshoppers, toads, and bats. **9/98**

Horicon National Wildlife Refuge Volunteers Contribute Nearly 1,000 Hours

Horicon National Wildlife Refuge
During the last quarter of the fiscal year (July through September), volunteers at Horicon National Wildlife Refuge contributed almost 1,000 hours of their time, mostly in the biology and public use programs. About 175 of those hours were used in staffing the visitor center during the week and on September weekends. Through their efforts, over 2,500 visitors have enjoyed the exhibits, gift shop, deck, and spotting scopes. **9/98**

Black Locust Trees Controlled At Trempealeau Refuge Prairies

Trempealeau National Wildlife Refuge
Trempealeau National Wildlife Refuge teamed up with Wisconsin Conservation Corps to eliminate young black locust trees from the Refuge's prairies. Black locust are undesirable prairie invaders that, when left unchecked, destroy the prairie. Corps members cut the trees and Service personnel treated the stumps to prevent cloning from the roots. About half of the Refuge's 300 acres of prairie were scoured for locust saplings. **9/98**

Trempealeau's \$4 million Environmental Management Project Nears Completion

Trempealeau National Wildlife Refuge
Construction of the Refuge's \$4 million Environmental Management Project is 95 percent complete. The three dikes and all the concrete work on the three pumping stations have been built. When the project is finished early next summer, the Refuge will have the capability to manage water levels on 1,500 acres of the Refuge pool. **9/98**

Refuge Assists Wisconsin Landowners Plant 96 Acres of Prairie

Trempealeau National Wildlife Refuge
The Trempealeau National Wildlife Refuge assisted in planting 96 acres of prairie in Buffalo and Trempealeau Counties, Wisconsin. This effort helped six private landowners convert farm fields into wildlife habitat. **9/98**

Morris District Restores 107 Acres of Wetlands on Private Lands

Morris Wetland Management District
The Morris Wetland Management District restored 34 wetland basins for a total of 107 acres for 11 different landowners. The restoration were accomplished in Big Stone, Lac Qui Parle, Pope, Stevens and Swift counties in Minnesota. **FY98**

Native Grass Seeded to 360 Acres at Morris Wetland Management District

Morris Wetland Management District
The Morris Wetland Management District reestablished 360 acres of native grasses on four newly purchased waterfowl production areas and two habitat conservation easements. Five species of warm season grasses and two species of cool season grasses were used in the mix. **9/98**

Prescribe Burning of 2,241 Acres is Record for Morris Wetland Management District

Morris Wetland Management District

Morris Wetland Management District had a record prescribe burn year, burning 2,241 acres. Acreage burned includes 20 Waterfowl Production Areas, a Minnesota Department of Natural Resources easement, and two Habitat Conservation Easement areas. All the burns took place in April and May. Weather cooperated allowing a record burn year. **FY98**

Morris Wetland Management District Haying Accomplishments

Morris Wetland Management District

This fiscal year, Morris Wetland Management District hayed 1,021 acres on 16 Waterfowl Production Areas and two Farm Service Agency easements. The areas hayed were in Big Stone, LacQui Parle, Pope, Stevens, Swift, Traverse and Yellow Medicine. A total of 24 fields were hayed with six fields having two cuttings. **FY98**

Morris' Native Grass Seed Harvest Tops 13,520 Pounds

Morris Wetland Management District

The Morris Wetland Management District harvested 13,520 pounds of native grass seed. Seed harvested includes Side Oats, Indian, Big Bluestem and Switch. Seed was collected from two Waterfowl Production Areas in Stevens County. The seed will be used next spring to reestablish native grasses. **FY98**

District Adds 211 Acres of Habitat Conservation Easements

Morris Wetland Management District

The Morris Wetland Management District added 211 acres of Habitat Conservation Easements and 338 acres of wetland easements. The easements are located in Big Stone, Pope and Swift Counties. **FY98**

Waterfowl Production Area Boundaries Posted

Morris Wetland Management District

The Morris Wetland Management District maintained the boundary signs on approximately 110 miles of Waterfowl Production Area boundary and established six miles of new posts. Boundary signs establish a respected boundary line and help to avoid potential law enforcement issues. **FY98**

Noxious Weeds Controlled on 2,084 Acres

Morris Wetland Management District

The Morris Wetland Management District controlled noxious weeds on 2,084 acres throughout the eight-county district. Control methods included boom spraying, invert spraying and mowing. A total of 90 Waterfowl Production Areas had noxious weed control. **FY98**

60 Volunteers Donate 1,600 Hours at Morris Wetland Management District

Morris Wetland Management District

Morris Wetland Management District had over 60 volunteers who contributed 1,600 hours of work. Some of the many projects include building and maintaining nesting structures, conducting biological surveys, developing interpretive signs, prescribed burning and miscellaneous office work. **FY98**

International Stewardship Conference

Cypress Creek National Wildlife Refuge

Refuge Manager, M. Hills, and Southern Illinois Director, Matt Nelson, attended the International Stewardship Conference in Tucson, AZ. They represented the Joint Venture partnership and the Cache River Wetlands, which has the significant designation as a Ramsar Site. Primary themes of the conference highlighted partnerships and watershed management. **1/98**

80,000 Tree Seedlings Planted on Cypress Creek National Wildlife Refuge

Cypress Creek National Wildlife Refuge

Cypress Creek Refuge staff and volunteers began the annual reforestation efforts on January 30, 1998; this was the earliest that Refuge staff have ever started planting. Due to warm and dry weather conditions, staff and volunteers planted 80,000 seedlings over approximately 200 acres; another 35,000 seedlings will be acquired from the state tree nursery for contract planting in the low, wet areas and additional planting by Refuge staff. The Refuge is fortunate to have funding assistance from outside sources; each year over \$40,000 is contributed to the reforestation effort on Cypress Creek National Wildlife Refuge. **2/98**

Horicon Complex Recognizes Volunteers' Successes

Horicon National Wildlife Refuge

At the Volunteer Recognition Evening, many volunteers were recognized for their contributions in 1997. In all, 252 people donated over 7,700 hours of time and talent to make the Refuge a better place for people and wildlife. This represents a huge increase in numbers of volunteers who participated in 1996 (105 people). The estimated value of their time in 1997 is over \$91,000. Chris Sarver of West Bend was named Volunteer of the Year, and Sara Hefter of Fond du Lac, Wis., and the Beaver Dam Charter School received special recognition for contributing the most hours in 1997 (219 and 653+ respectively). Volunteers worked in administrative, public use, biology, and maintenance projects. **1/98**

Outdoor Subjects Taught During Environmental Field Days at Trempealeau Refuge

Trempealeau National Wildlife Refuge

Five hundred seventy-five eighth graders from Trempealeau County schools visited the Refuge October 1-2, 1997, as part of Environmental Field Days, an annual event designed to instruct the students in outdoor issues. Refuge staff and five volunteers conducted programs on aquatic invertebrates, wetlands, birds, and migration. **10/97**

...the Adopt-A-Moose program reached 19 schools (93 classes, 2700 students), three scout groups and 40 sponsors.

- Agassiz National Wildlife Refuge

Mississippi Headwaters / Tallgrass Prairie Ecosystem

1998 Ruffed Grouse Drumming Survey at Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge

A census was conducted on two survey routes April 28, 1998, by Refuge staff. Drums were 50 percent lower than last year. Based on a 10-year cycle, 1998 was expected to be a very high peak year, but apparently Agassiz Refuge's peak year was 1997. A second count was conducted, with little change in results. The difference from 1998's surveys and the last two may be a result of record high water levels in 1996 and 1997, which may have caused birds to concentrate near roads, resulting in higher than actual counts for the past two years. **4/98**

Field Reconnaissance: Contaminant Study & CAP Manual

Agassiz National Wildlife Refuge

A field reconnaissance team consisting of Agassiz Refuge Biologist Gary Huschle, Dave Warburton, Ecological Services, and representatives from U.S. Geological Survey, Biological Research Division, and Dr. Bruce Eichhorst, University of North Dakota, surveyed Refuge and nearby lands for potential contaminants May 4-5, 1998. The team visited four watersheds that drain into Agassiz Refuge to determine differences and similarities with respect to land use, and potential contaminants entering the Refuge. Nesting black-crowned night heron sites were marked and swallow boxes checked. Field season plans were made and assignments for the CAP manual requirements were discussed. A technician will be on station by mid-May for data collection. **5/98**

Stem Mining Weevils Released to Control Canada Thistle

Agassiz National Wildlife Refuge

Refuge staff released 300 Stem Mining Weevils in three different locations west of Farmes Pool. This is the first time biological control agents have been released on the Refuge for control of Canada thistle. Two other Canada thistle "bugs" are scheduled for release. Results will be monitored by Refuge staff and Perham School District students. **5/98**

Northwest Minnesota Moose Mystery Challenge Receives Award

Agassiz National Wildlife Refuge

Northwest Minnesota's Moose Mystery Challenge, a three-year study to determine the cause of the decline in Northwest Minnesota's moose herd, received a semifinalist award in the Partnership Minnesota's 1998 Cooperative Public Service Award. Agassiz National Wildlife Refuge and Red Lake Wildlife Management Area nominated the Challenge for the award in the Government and Environment category. There were three levels of recognition in this category: Cooperative Public Service Award, Semi-Finalist Award, and Governor's Certificate of Commendation. An award ceremony was held May 6, 1998, at the Partnership Minnesota Conference at the Hubert H. Humphrey Center, University of Minnesota. Partnership Minnesota, an intergovernmental partner of the Federal Executive Board, was formed in 1988 to promote enhanced cooperation between federal, state and local government agencies in their efforts to provide services to the citizens of Minnesota. Our nomination of partners included two government agencies, two universities; 70 private businesses and individuals; five conservation organizations; a local foundation; and 9,000 volunteer hours donated by volunteers and private landowners. Cash donations totaled nearly \$50,000 over the past two years along with donated equipment. The educational component of this nomination was the Adopt-A-Moose program which is reaching 19 schools (93 classes, 2700 students), three scout groups and 40 sponsors. All 88 contributors received award certificates. **5/98**

Media, Lawmakers Tour Habitat Restoration Projects

Upper Mississippi National Wildlife Refuge

The Service, U.S. Army Corps of Engineers, Wisconsin Department of Natural Resources and Brennen Construction Company sponsored a media event on May 6, 1998, to highlight the Phase II Environmental Management Program - Habitat Rehabilitation and Enhancement Project on Lower Pool 8. The event lasted approximately two hours and featured three stops including watching current construction, visiting Phase I projects, and seed islands. Television stations WXOW and WKBT, the *LaCrosse Tribune* newspaper, and two congressional aides (from the offices of Ron Kind and Gil Gutknecht) participated in the event. **5/98**

Bullrush Tubers, Seeds Planted for Agassiz Refuge Project

Agassiz National Wildlife Refuge

Refuge staff planted bullrush tubers and seeds that overwintered in different treatment conditions at Agassiz Refuge. Three tuber treatments and two seed treatments were planted in Headquarters Pool in 7 randomly selected plots in three macro sites. Planting occurred more than two days. The purpose of the project is to see if bull rush can be established in Headquarters Pool, and to see if the less time consuming method of planting seeds versus tubers would produce sufficient numbers of a plant/seed source for vigorous stand establishment. **5/98**

Waterfowl Identification Program Part of Student Conservation Day

Big Stone National Wildlife Refuge

Forestry Technicians presented a Waterfowl Habitat and Identification program to 203 students during Conservation Day on May 7, 1998, at Traverse County (Minnesota) State Park. **5/98**

Iowa Department of Natural Resources Releases 10 Trumpeter Swans at Union Slough

Union Slough National Wildlife Refuge

As part of a 10-year project to return trumpeter swans to northern Iowa, the Iowa Department of Natural Resources has released annually 8 - 10 captive reared swans on suitable wetlands in the northern tier of counties. In 1998, Union Slough National Wildlife Refuge was selected for the release of ten swans. The slough was selected primarily due to the high quality of the wetland habitat, the relative seclusion the Refuge provides, and the geographic location in relation to other releases. **5/98**

First Annual Bird Festival at Big Stone National Wildlife Refuge

Big Stone National Wildlife Refuge

Big Stone National Wildlife Refuge celebrated International Migratory Bird Day with the first annual Big Stone Bird Festival, May 8-10, 1998. More than 50 bird enthusiasts from five states attended. A highlight of the festival included the "Turn of the Century Birding Train Ride." Another memorable event occurred when a Eurasian Collared Dove was observed. Also, a peregrine falcon was seen and adult nesting bald eagles were observed caring for their newly hatched young at the nest. About 125 different species were observed. **5/98**

Minnesota Valley Hosts International Migratory Bird Day

Minnesota Valley National Wildlife Refuge

Refuge and volunteer staff created a deeper awareness of migratory birds during a six - hour special event at the Como Zoo in St. Paul, Minn. The outreach activity allowed us to contact a diverse ethnic and inner-city audience which is less likely to visit Minnesota Valley National Wildlife Refuge. **5/98**

International Migratory Bird Day Partners Setup Displays at Dresbach Information Area

Upper Mississippi River National Wildlife and Fish Refuge

Members from the Friends, Upper Mississippi River Refuge and Coulee Audubon along with Refuge staff set-up displays at the Dresbach, Minn., Information Area, just west of LaCrosse, Wis., on Interstate 90. The groups contacted approximately 65 people who stopped by the displays. **5/98**

Students Assist With Refuge Tree Planting

Big Stone National Wildlife Refuge

Twenty-eight high school students assisted with a tree planting project on Big Stone National Wildlife Refuge. Twelve students were from the agriculture class at Milbank High School, Milbank, South Dakota, and 16 students were from the environmental science class at Ortonville High School, Ortonville, Minnesota. A challenge grant was received for river corridor enhancement. **5/98**

Volunteers Construct Footbridge on Sherburne National Wildlife Refuge

Sherburne National Wildlife Refuge

A 30-foot wooden footbridge over the drainage creek from School House Pool was constructed with labor assistance from six volunteers from the Telephone Pioneers of America and funding assistance from Minnesota Bowhunters, Inc. and the Friends of Sherburne National Wildlife Refuge. **5/98**

Big Stone Staff and Minnesota Department of Natural Resources Survey Waterfowl

Big Stone National Wildlife Refuge

Big Stone National Wildlife Refuge employees, Rich Papasso, Eric Rozowski and Stephen Revering participated with the Minnesota Department of Natural Resources in conducting the breeding pair count in Big Stone, Douglas and Grant Counties. This is an annual count of waterfowl trends in Minnesota. **5/98**

Prairie Preservation Project Decision Part of Detroit Lakes Festival of Birds

Tamarac National Wildlife Refuge

The event included field trips, bird walks, arts and crafts, a banquet and other activities. Approximately 230 birders registered to take part in trips and banquet, while more than 500 people attended the variety of activities offered. Regional Director Bill Hartwig attended the Saturday evening banquet, signing the record of decision to create the Northern Tallgrass Prairie Preservation Project. The festival was funded, in part, by a Service Challenge Grant, partnering with the local chamber of commerce, birding club, and other Detroit Lakes businesses and organizations. **5/98**

Friends of Sherburne Refuge Help Celebrate International Migratory Bird Day

Sherburne National Wildlife Refuge

Sherburne National Wildlife Refuge partnered with the Friends of Sherburne in celebrating International Migratory Bird Day by offering a day of guided birding tours on the Refuge. A total of 54 people participated in the three tours, each designed to reach a different level of birding experience. Visitors came from as far away as Australia and Bemidji. Awareness of International Migratory Bird Day was spread throughout the communities surrounding the Refuge through community education bulletins, news releases and by distribution of International Migratory Bird Day posters to local schools. **5/98**

Writers For Birding Publications Tour Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge

Three writers for birding magazines were given a four-hour tour of Agassiz National Wildlife Refuge by Refuge staff. The Minnesota Office of Tourism in Thief River Falls, Minnesota, arranged the five-day bird tour of northwestern Minnesota, and paid the birders' expenses. . An air boat ride to the Franklin's gull, black-crowned night heron and eared grebe colonies allowed close up viewing of the birds, nests, young and adults. Photographs were taken by one of the writers. The tour of Agassiz National Wildlife Refuge will increase exposure of the bird life on the Refuge to many citizens of the United States, with articles to be written in national birding magazines. With more exposure, more people who enjoy birding and watching wildlife will visit these areas. **5/98**

Sherburne National Wildlife Refuge Burns 6,323 Acres

Sherburne National Wildlife Refuge

The extensive prescribed burning program at Sherburne National Wildlife Refuge is in support of the Refuge's landscape objectives of maintaining remnant Oak Savanna, Oak Woodland - Brushland habitat, and conversion of degraded habitat to Oak Savanna, Oak Woodland - Brushlands. Oak Savanna, Oak Woodland - Brushland is the historic habitat of the area and contains some of the most species rich plant communities in Minnesota. The spring of 1998 provided ideal weather conditions for the planned burning. Supporting the effort were Refuge staff, along with staff from St. Cloud Private Lands Office, and Rice Lake National Wildlife Refuge. Also, several students from St. Cloud State University, who had been trained to participate in the Refuge's fire program, assisted. These students were able to be paid for their labor through a prescribed fire account. **5/98**

Agassiz Refuge Volunteer Appreciation Potluck Held

Agassiz National Wildlife Refuge

Beulah Wikstrom, Refuge office assistant, organized an evening of entertainment and good food to recognize the Agassiz Refuge volunteers. Ten volunteers enjoyed a potluck meal, a Minnesota comedian "Lars Pedersen," and Minnesota polka music. Volunteers currently on board include folks from New York,

California, Michigan, Ohio, Maryland and Minnesota. Staff and families from Agassiz (and alumnae), and Minnesota Department of Natural Resources from Red Lake and Thief Lake Wildlife Management Areas, and the Karlstad office brought the gathering to about 40. Volunteers are working on wolf, moose, bittern and contaminant studies. Most spend at least three-month terms. The affair was held at the Holt Community Center. **6/98**

Windom District Prescribe Burns 2,200 Acres to Improve Nesting Habitat

Windom Wetland Management District

Prescribed burning was used to stimulate native grasses and suppress invading exotic plants. This improves nesting habitat for ground nesting birds and stimulates native prairie plants to produce seed which is harvested and then used to reestablish native prairie habitat. Prescribed burning was completed on 15 Waterfowl Production Areas on Windom Wetland Management District for a total of 2,200 acres. **6/98**

New Bald Eagle Nest Makes Four for Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge

A new bald eagle nest was discovered during aerial surveys. This brings the Refuge total to four active nests. Five young eagles were produced from these nests. The Refuge locations and numbers of young eagles are as follows: North Wilderness, two; South Wilderness, one; Island, one; West Golden, one. None of the eaglets had fledged. **6/98**

Fergus Falls Wetland Managers Complete Prescribed Burnings for 1998

Fergus Falls Wetland Management District

The Fergus Falls Wetland Management District in cooperation with the Fergus Falls and Glenwood, Minn., Department of Natural Resources offices, recently completed prescribed burning on 31 separate tracts totaling 3,207 acres in the four-county district. Prescribed burning enhanced numerous areas for waterfowl nesting, maintenance of native prairie and harvest of grass seed for future prairie restorations. The burns benefit more than 250 species of grassland birds as well as numerous native plants species. Partners included the Minnesota Department of Natural Resources and the Fergus Falls Fish and Game Club. **6/98**

Nongame Bird Survey Focuses on Grassland Birds

Fergus Falls Wetland Management District

The Fergus Falls Wetland Management District through a private contractor has initiated its 1998 grassland bird point counts on 14 native prairie sites throughout the Wetland Management District. These sites are owned by the Service, Minnesota Department of Natural Resources and The Nature Conservancy. Breeding bird species are documented and management efforts are directed toward enhancing species in decline. Species documented include bobolink, grasshopper sparrow and upland sandpiper. **6/98**

Native Grass Nesting Cover Re-established at Windom Wetland Management District

Windom Wetland Management District

Native grass and forb seed was planted to reestablish tall grass prairie habitat. An emphasis was placed on reestablishing diverse, locally adapted native plants for wildlife, especially for ground nesting birds. **6/98**

Sherburne Refuge Seeds 308 Acres to Prairie

Sherburne National Wildlife Refuge

Working with our partners, 314 acres of prairie/Oak Savanna understory were restored in 1998, 78 acres on private lands and 236 on Refuge lands. A total of 3,564 pounds of native prairie seed was used with an open market value of approximately \$20 per pound. If purchased this seed would have cost \$71,280. Seed harvested at Big Stone National Wildlife Refuge and cleaned at Detroit Lakes Wetland Management District was used to help accomplish these restorations along with specific species of grasses and forbs purchased to enhance the seeding diversity. **6/98**

Restoration and Dedication of Maynard Reece Waterfowl Production Area

Union Slough National Wildlife Refuge

Maynard Reece, renowned wildlife artist and lifetime conservationist, was on hand for the dedication of the 314-acre Maynard Reece Waterfowl Production Area on June 20, 1998. Restoration of this area was completed in July, 1998 with the planting of 150 acres of tallgrass prairie. In 1997, 90 acres of prairie and 70 acres of pothole wetlands were restored. **6/98**

Native Seed Collected on Sherburne National Wildlife Refuge

Sherburne National Wildlife Refuge

Sherburne National Wildlife Refuge has started a native seed collecting program consisting of volunteers and staff. Thirty volunteers have been divided into three teams, each covering a particular area of the Refuge. Co-leaders are in charge of contacting the team members for scouting, identifying, mapping, observing, collecting and cleaning the plants and seeds. With the amount of area on the Refuge, the volunteers have only been able to cover a small portion this season. **6/98**

Biological Control Agents Released to Control Canada Thistle

Agassiz National Wildlife Refuge

300 Shoot Gall Flies (*Urophora cardui*) and 300 Seed Head Weevils (*Larinus planus*) were released to two sites recently for control of Canada Thistle. One hundred of each species were released in the Diversion Road area and 200 of each in the Farnes Pool area. Earlier, on May 6, 1998, 300 Stem Mining Weevils (*Ceutorhynchus litura*) were released. **7/98**

Breeding Bird Point Counts Completed at Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge

Breeding bird point counts were completed in the North Wilderness unit, South Wilderness unit and the Sedge Community. Winter wrens were confirmed nesting, merlins may be nesting. Stemless lady slippers were found and pitcher plants in great abundance in Whiskey Lake Area. **7/98**

Fergus Falls Wetland Management District Completes Biological Controls

Fergus Falls Wetland Management District

On June 23, 1998, staff from the Fergus Falls Wetland Management District traveled to Ward County, North Dakota, and collected two species of insects for biological control of leafy spurge. Over a quarter of a million insects including two species, *Aphthona nigricutis* and *Aphthona lancertosa* were collected and transplanted. Releases were made on nine Waterfowl Production Areas with heavy infestations of leafy spurge in Otter Tail, Grant and Douglas Counties. The insects feed on spurge stems and roots weakening the plants' capability to flower, produce seed and to spread to adjacent areas. Preliminary results from earlier releases have proven the technique to be successful. **7/98**

Gehl Family Descendants Visit Old Memories at Minnesota Valley Refuge

Minnesota Valley National Wildlife Refuge

A relationship was initially established with the Gehl family by Judie Miller when she led a joint Nature Conservancy Tour to the Rapids Lake Unit two years ago. At that time she met one of the Gehl family members who kept in contact by phone and letters. The Gehl family planned a family reunion for 1998 and requested a special tour of the Rapids Lake Unit to revisit the site of their heritage. The family was extremely interested in learning about the prairie and photographed the blooming prairie plants. They visited the site of the old farm house, and hiked to the Carver Rapids where they often went to picnic as children. They shared many family stories about their heritage and their memories of Carver. Their excitement has led them to offer a donation of historical records and other items should the home site be restored. They also suggested that they might consider future financial contributions. **7/98**

Two Damaged Water Control Structures Replaced at Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge

The East Pool and Dahl Pool water control structures were severely damaged in the 1997 floods. The old structures were removed and replaced with corrugated metal stop-log water control structures. This was accomplished under an 8-A Contract to Frontier Construction Company, Deer River, Minnesota. Construction began in the fall of 1997 and was completed in spring 1998. **7/98**

Refuge Staff and Volunteers Band Canada Geese

Union Slough National Wildlife Refuge

This year's high rainfall across most of Iowa has left state biologists scrambling to reach their banding goals. When the water levels rise, the geese are able to move from wetland to wetland, making trapping and banding difficult. However, stable water levels at Union Slough National Wildlife Refuge were ideal for goose production in 1998, and made capturing the year's young much easier. With the help of the Kossuth County Conservation Board staff, Iowa Department of Natural Resources biologists, and Refuge volunteers, 184 geese were captured and banded. **7/98**

Two American Bitterns Collared For Satellite Tracking

Agassiz National Wildlife Refuge

Two American bitterns were recently fitted with satellite-tracking collars to help the Service monitor the birds' migrations routes and behavior. The "collaring" effort is part of a seven-year study on American bitterns. Very little is known about the life histories of American Bitterns, whose numbers are declining nationwide, and dramatically so in the Midwest. This is the first time satellite collars have been used on this species. Costs for the collars (\$3,000) and the platforms for data collection (\$1,000) were paid with grant funds from the State Conservation Partners Program and the Agassiz Audubon. Two more collars are scheduled to go on birds in Wisconsin. **7/98**

Environmental Compliance Audit Conducted at Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge

Pat McDermott, Region 3 engineering office, and Terry Clayton, national coordinator of the audit program, Denver, Colo., conducted an on-site Environmental Compliance Audit July 14, 1998, for hazardous materials of all Refuge buildings, grounds and facilities. One day was devoted to inspection and the second day to a summary of findings and suggested corrective actions. **7/98**

Sherburne Refuge Produces 68,000 Beetles for Biocontrol of Exotic Plants

Sherburne National Wildlife Refuge

Sherburne National Wildlife Refuge is acting as a rearing facility for two species of leaf-eating beetles which are biological control agents for the exotic plant, purple loosestrife which is overtaking our native wetland habitats. Over 68,000 beetles were reared in Fiscal Year 1998 and were released on 10 Refuge sites to facilitate ecologically sound control measures on over 600 infested acres. Three station sites were also treated with these insects. More than 200 volunteer hours were accumulated in aid of this project -- used in the insectory setup, collection of beetles and monitoring efforts. **7/98**

Grass Seeding Completed at Hamden Slough National Wildlife Refuge

Hamden Slough National Wildlife Refuge

One hundred seventy-four upland acres were seeded to native grass on Hamden Slough National Wildlife Refuge. At the North Star 2000 development site, 147 acres were seeded. Tamarac National Wildlife Refuge provided a tractor and operator and Detroit Lakes Wetland Management District provided the drills. **7/98**

Agassiz Employee Shares Trapping Tips, Ethics at Pioneer Village

Agassiz National Wildlife Refuge

Dave Myhrer, engineering equipment operator, gave 20-minute presentations and demonstrations to 16 groups of youths, ages five to 11, on trapping history, methods, ethics, and fur bearer identification and food and habitat needs. Displays of various furs, traps and trapping equipment were available and demonstrations given. This occurred on July 22 and 23, 1998, at Pioneer Village in Thief River Falls, Minn. About 144 children and 16 adults participated. **7/98**

Refuge Programs Discussed on Local Radio Program

Agassiz National Wildlife Refuge

KTRF Radio, Thief River Falls, Minn., interviewed Refuge staff July 9, 1998. The interviews covered nine topics: Refuge maintenance, water level management, farming, waterfowl nest success, gosling production, moose calf, Conservation Reserve Program initiatives, upcoming events including an August 16 Open House on wolves, and Waterfowl Banding opportunities for the public. **7/98**

Sherburne Refuge Reintroduces Extirpated Prickly Pear Cactus Plant

Sherburne National Wildlife Refuge

Prickly pear cactus (*Opuntia fragilis*.) a member of the globally endangered Midwest Oak Savanna plant community the Refuge is restoring, and formerly extirpated from the Refuge, was reintroduced to the Refuge this summer. About 50 individual plants were transplanted in partnership with the Minnesota Department of Natural Resources. The plants were obtained from a remnant population in an adjacent state forest where its continued existence is threatened by an encroaching pine plantation. The transplants will be monitored for survivorship and health. **7/98**

Noxious Weed Control Completed on 43 Waterfowl Production Areas

Windom Wetland Management District

Exotic, noxious weeds were treated for eradication and prevention of seed production. In most cases, state laws requiring treatment of these noxious weeds reduce plant species diversity which adversely affects wildlife. **8/98**

'Howling Good Time' at Agassiz National Wildlife Refuge August Open House

Agassiz National Wildlife Refuge

Two Refuge personnel staffed the Refuge office from 1 p.m. to 6:30 p.m. during the Refuge's August Open House. Wolf researcher Andreas Chavez presented a one and one-half hour talk on radio and non-radio collared wolves on and near the Refuge at the Refuge office. Later that evening, 32 attendees were taken out on the Refuge to howl for wolves. Strong winds prevented any wolf howling responses. The wolf program was presented to inform the public about the last two years of wolf study on and near the Refuge. The howling was done to let people hear a real wolf howl. **8/98**

47 Wetlands Restored at North Star 2000 Site *Hamden Slough National Wildlife Refuge*

North Star 2000 will restore 220 wetlands and 965 acres of upland, on and near Hamden Slough National Wildlife Refuge. Phase I (Fiscal Year 1998) of the North Star project will restore 70 wetlands and 160 acres of native upland, surrounding Bisson Lake. Bisson Lake is the center and center piece of North Star 2000. Forty-seven wetlands were restored in August, for a total of 62, during Fiscal Year 1998. Eight additional wetlands will be restored in September. A total of 187 acres of upland were seeded in July. **8/98**

Mille Lacs Band of Ojibway Harvest Wild Rice at Sherburne National Wildlife Refuge

Sherburne National Wildlife Refuge
Using traditional harvest methods, members of the Mille Lacs Band of Ojibway harvested 50 pounds of wild rice from Buck Lake on Sherburne National Wildlife Refuge. The rice will be planted into Lake Onamia to restore the rice beds there. The harvest was part of an agreement with the Minnesota Department of Natural Resources and the Service. **9/98**

North Dakota Graduate Students Assist with Mallard Duck Banding

Hamden Slough National Wildlife Refuge
Eight graduate students from North Dakota State University assisted Refuge personnel with mallard banding on Hamden Slough National Wildlife Refuge. One graduate student from Nepal found the experience to be a unique American opportunity. Additional volunteers included an NDSU's ornithology professor, and the Administrator of the Buffalo-Red River Watershed District. This was the first year for rocket netting on the Refuge. Refuge personnel felt the experience would be an outstanding experience for nearby universities. A total of 260 mallards have been banded, after three nettings. **9/98**

Minnesota, Wisconsin Land Managers Tour Sherburne National Wildlife Refuge

Sherburne National Wildlife Refuge
Sherburne National Wildlife Refuge hosted a management tour for land managers on adjacent areas with oak-sand-tallgrass prairie on Sept. 2, 1998. Thirty-seven people attended from Wisconsin and Minnesota Departments of Natural Resources, The Nature Conservancy, University of Minnesota, St. Cloud State University, Hennepin County Parks and

St. John's University. The tour's objectives were to exchange management information and to provide initial peer review of the landscape plan. An excellent exchange of information occurred culminating with a turkey barbecue at the schoolhouse. **9/98**

750-Foot Accessible Hiking Trail Added to Wildlife Drive

Sherburne National Wildlife Refuge
Working with Refuge partners, Sherburne National Wildlife Refuge has established a 750-foot accessible trail. This asphalt trail is located near the start of the eight-mile Wildlife Drive and will provide access to the highest concentration of visitors on the Refuge. The trail winds through a restored prairie-oak savanna complex and will eventually connect to a cedar deck overlooking a wetland. A prairie demonstration garden has already been planted and an orientation kiosk is being designed to greet visitors and provide valuable viewable wildlife information. **9/98**

Sherburne Refuge Manages Over 6,100 Acres of Wetlands

Sherburne National Wildlife Refuge
Sherburne National Wildlife Refuge actively manages water in 24 wetland impoundments to provide a wetland complex for a variety of wetland dependent wildlife. Eight pools were drawn down and subsequently re-flooded: five this spring, two this summer, and one this fall; producing over 2,500 acres of wild rice and moist soil foods for migratory and production use by water birds. In addition, deep water habitat in the other 16 pools provided resting places as well as floating and submergent plants for those requiring deep water habitats and a healthy fishery capable of supporting five active pairs of the federally-threatened bald eagle. **9/98**

Sherburne-Crane Meadows Restore 417 Acres of Wetland Habitat

Sherburne National Wildlife Refuge
The Sherburne/Crane Meadows National Wildlife Refuge Complex completed 32 wetland restorations totaling 417 acres in Fiscal Year 1998. The majority of these restorations were in conjunction with other partners and included upland restoration projects funded through state, private and federal programs. **9/98**

Minnesota Waterfowl Association Assists in Wetland Restoration

Windom Wetland Management District

Construction of a water control structure and completion of a ditch clean-out enabled the de-watering and vegetation re-establishment of a 34-acre wetland located on the Iowa Waterfowl Production Area. The Minnesota Waterfowl Association contributed to this project. **9/98**

Public Duck Banding Evening Held at Agassiz National Wildlife Refuge

Agassiz Wetland Management District

Refuge staff personnel demonstrated duck rocket net catching, banding, aging and sexing techniques to 45 people participating in this annual refuge event. This event was held at one of the Refuge's banding sites to educate the public on banding and the information gained from people reporting birds found with bands. **9/98**

University Student Volunteers 160 Hours to Assist Windom Wetland Management District

Windom Wetland Management District

South Dakota State University Wildlife Management student donates 160 hours to assist with management and office programs. **9/98**

Safe and Convenient WPA Parking Areas Constructed at Windom WMD

Windom Wetland Management District

Public use of Waterfowl Production Areas is encouraged. It is necessary to provide safe and convenient parking areas at the Waterfowl Production Areas.. Through the contributions of the Cottonwood County Game and Fish League, seven parking areas were constructed on the Waterfowl Production Areas. **9/98**

Native Grass Seed Harvest at Windom Wetland Management District

Windom Wetland Management District

Local harvest of native grass and forb seed provides locally adapted seed at a significant cost savings to the government. This seed is used to re-establish native grass/forb habitat on new Waterfowl Production Areas and easement areas for the benefit of wildlife. **9/98**

Sherburne-Crane Meadows Complex Participates in Water Festival

Sherburne National Wildlife Refuge

Sherburne-Crane Meadows staff were four of 30 instructors from 10 agencies and schools who presented the Morrison County (Minnesota) Water Festival September 22-23, 1998, to 516 sixth grade students from the county. The event, coordinated by the Morrison County Water Plan staff, is annually held at Camp Ripley, near Little Falls, Minn. Participating schools were from Little Falls, Pierz, Royalton, Swanville, Upsala and Lourdes. Program topics included wetlands and wildlife, water purification, surface water quality, ground water quality, enviroscape, aquifers and macro invertebrates. **9/98**

North Star 2000 Partnership Restores 70 Wetlands at Hamden Slough Refuge

Hamden Slough National Wildlife Refuge

Phase One of North Star 2000, a partnership project involving the Service, was completed recently on Hamden Slough National Wildlife Refuge in northeast Minnesota. North State 2000 will eventually restore 220 wetlands and 1,000 acres of upland around Bisson Lake, a 112-acre drained wetland and part of the Buffalo River watershed on the Refuge. The diversity of the partnerships, stakeholders, permits, funding, equipment and staffing required the project to be divided into three phases. During Fiscal Year 1998, Phase One restored 70 wetlands, covering 45 acres surrounding Bisson Lake. A total of 167 acres around the wetlands were seeded to native grass. An additional 5,000 cubic yards of fill and sediments were removed from the wetlands to enhance cattail management. This required intensive negotiations with the Buffalo- Red River Watershed District and the Red River Water Management Board, who were interested in the affect of surface and sub-surface water. **9/98**

Service Joins Elk River Students to Establish School Prairie

Sherburne National Wildlife Refuge

Students at Elk River High School recently teamed with the Service's Sherburne National Wildlife Refuge in an effort to establish a School Prairie at the new Zimmerman Middle School in Elk River, Minnesota. Working with Refuge staff, the high school students established a five-acre prairie and green house. Native prairie forbs will be grown in the green house and used to supplement restoration efforts both on and off the Refuge. A similar project is also underway at the Isanti Youth's Ranch. A green house has already been constructed where Refuge and Ranch personnel will work with court-appointed youth to help restore our vanishing prairie/savanna landscape. **9/98**

Intern Program Helps Students Focus On Future, Resource

Sherburne National Wildlife Refuge

For the fifth summer in a row, the Sherburne/ Crane Meadows National Wildlife Refuge Complex has hosted a summer intern program. This summer one high school and four college students were selected to participate in the program. Students worked side by side with Refuge staff and gained valuable work experience and insight into future career opportunities. All four college students volunteered three days per week for twelve weeks, the high school student volunteered two days per week for six weeks. **9/98**

Rapids Lake Vegetation Monitoring Completed at Minnesota Valley

Minnesota Valley National Wildlife Refuge

Minnesota Valley National Wildlife Refuge staff and volunteers completed the baseline vegetation monitoring of the Rapids Lake Oak Savanna site. The site is a degraded oak savanna that has been invaded by cedar trees and is a good candidate for restoration. The baseline data and future monitoring efforts will help Refuge management monitor the progress of restoration efforts. **9/98**

Sherburne Refuge Hosts Record Number of Sandhill Cranes

Sherburne National Wildlife Refuge

The Sherburne National Wildlife Refuge has emerged as a regionally important area for greater sandhill cranes. This fall, the Refuge emerged as a prominent staging area, reporting a record 738 birds using it as a feeding and roost

area during migration. This number is a dramatic increase from the first 25 birds recorded staging at the Refuge in 1986. Nesting has also increased dramatically from one pair in 1975 to the current 30 nesting pairs. Surveys are performed in cooperation with St. Cloud State University, which uses the Refuge for an outdoor classroom for its wildlife management courses. The annual spring unison call survey, used to locate breeding pairs, also included partnerships with a local reporter, Princeton High School and regular Refuge volunteers. **9/98**

Wildlife Film Festival At Sherburne National Wildlife Refuge

Sherburne National Wildlife Refuge

More than 200 people attended the three evenings of the Wildlife Film Festival held Jan. 22 and 29; and Feb. 5, 1998, at Sherburne National Wildlife Refuge. Each evening, films were shown that covered a wide variety of information on wildlife and wild lands common to the Refuge and included topics ranging from beavers, the marsh, and birdwatching to animal camouflage, Canada geese and wild turkeys. **1/98**

50 Attend Public Meeting for Mt. Park Restoration Project

Windom Wetland Management District

Local interest in the restoration of the drained, 1,100-acre Mt. Park wetland, led to a public meeting to discuss options and evaluate public support. Approximately 50 people attended the meeting. **1/98**

***Nearly 700 people attended the
annual Winter Fun Day at
Sherburne National Wildlife
Refuge...***

***Sherburne NWR
Outreach Accomplishment***

1998 Fire Effect Monitoring Ends; 17 New Plant Species Found on Refuge

Sherburne National Wildlife Refuge

Fire Effects Monitoring program began in 1993 with the establishment of the National Park Service protocol for monitoring the effects of fire on vegetation and substrates. Three strata are monitored at the Refuge: Dry Oak Forest, Oak Savanna, and reestablished prairie grasslands. Plots are inventoried pre-burn and following a burn at intervals of one, two, three, five and 10 years. Variables measured to statistically significant levels include relative cover of native grass, native forbs and native brush, and basal area of native over story trees. A total of 95 plots have been established. In 1998, 15 new plots were established in Dry Oak Forest, and 3 plots were revisited. In Oak Savanna, seven new plots were established and eight plots were revisited. In Grasslands, five new plots were established and 14 plots were revisited. Species of plants not recorded previously at Sherburne National Wildlife Refuge are encountered by the monitoring regularly. This season, new finds include: *Osmorhiza Claytonii*, hairy sweet cicely; *Ostrya virginiana*, Iron-wood; *Medicago lupulina*, black medic hop clover; *Cenarurea biebersteinii*, spotted knapweed; *Cystopteris fragilis*, fragile fern; *Eriogonum annuum*, umbrella plant annual buckwheat; *Linum rigidum*, stiffstem flax; *Lycopodium complanatum*, groundcedar; *Oryzopsis pungens*, mountain ricegrass; *Paspalum setaceum*, bead grass; *Strophostyles leiosperma*, woolly bean; *Dichanthelium sabulorum*, American panic-grass; *Agrostis heymalis*, tickly grass; *Salvia reflexa*, lance-leaved sage; *Liatris punctata*, dotted blazing-star; *Liatris cylindraceae*, cylindric blazing star and *Coeloglossum viride*, long-bracted orchis. Some of these species, such as *Coeloglossum viride*, have never been found before in the county. Others interestingly have only been found at Sherburne. Sherburne's plant list has now reached 750 species with these additions. Following the field season, data collected is entered into a database and an annual report covering program status and data analysis is completed by the fire management officer. **9/98**

Prairie Restoration, Photography Part of Tamarac's Fall Open House

Tamarac National Wildlife Refuge

Talks were given by Jim Johansen of Prairie Restorations (how to create a prairie) and Dominique Braud, wildlife photographer (tips on getting good wildlife photographs). Demonstrations on processing wild rice, birch bark and sweet grass crafts were given by White Earth Tribal members, Earl and Kathy Hoagland and Genevieve Pablona. A demonstration of pine needle basketry and rustic birdhouses was given by July and Miles Kohont. Refreshments were also offered throughout the day. **9/98**

Three Native Seed Drills Purchased for Detroit Lakes Wetland Management District

Detroit Lakes Wetland Management District

With funding from Ducks Unlimited and the Prairie Pothole Joint Venture, three Truax native grass and forb seed drills were purchased for the Detroit Lakes Wetland Management District. The drills will be used to establish native grass and forbs on about 500 acres of uplands on District Waterfowl Production Areas each year. These areas will annually provide habitat for about nine broods of ducks and numerous other wildlife species. The Waterfowl Production Areas will also provide opportunities such as hunting, trapping, wildlife observation, and other recreational activities for numerous people to enjoy. **11/97**

Youths Hunt Deer on Rydell National Wildlife Refuge

Detroit Lakes Wetland Management District

On the weekends of November 8-9 and 15-16, 1997, 14 youth hunters, ages 12-15, and their mentors participated in the youth deer hunt on the Rydell National Wildlife Refuge. The young hunters and mentors had recently completed more than 14 hours of hands-on training that focused on developing deer hunting skills and responsible hunting behavior. By the end of the two weekends, six of the 14 hunters had bagged a deer. **11/97**

91,000 Pounds of Native Seed Cleaned at Detroit Lakes Wetland Management District

Detroit Lakes Wetland Management District
More than 91,000 pounds of native grass and forb seed were cleaned and processed by personnel at the seed cleaning facility at the Detroit Lakes Wetland Management District. The seed, valued at more than \$819,000, was harvested last fall from native prairie grassland sites throughout western and central Minnesota by five Wetland Management Districts, three national wildlife refuges, four Minnesota DNR stations, and the White Earth Tribe. The seed will be used to restore 5,600 acres of old crop land into upland nesting habitat for migratory and resident ground nesting birds. An estimated 613 ducks will be produced in this habitat annually and numerous other migratory and resident wildlife species will also benefit. **11/97**

700 Attend Winter Fun Day At Sherburne National Wildlife Refuge

Sherburne National Wildlife Refuge
Nearly 700 people attended the annual Winter Fun Day at Sherburne National Wildlife Refuge on February 14, 1998, to celebrate wildlife in winter, winter recreation and the Refuge System Birthday. This family oriented event included horse drawn sleigh rides with volunteer interpreters on board, a snowshoe hike, snowshoeing, *skijoring*, cross-country skiing, talks on wildlife in winter and winter bird feeding and a feature program on dog sledding. The day ended with a candlelight ski and bonfire at Sand Dunes State Forest which drew nearly 130 skiers. **2/98**

Sherburne National Wildlife Refuge Recognizes 500 Volunteers

Sherburne National Wildlife Refuge
At a special awards dinner held on March 12, Sherburne National Wildlife Refuge recognized 500 individuals from local communities, scout troops, school classes, 4-H clubs and other conservation groups who contributed over 6,600 hours of service to the Refuge during 1997. Volunteer projects varied according to the needs of the Refuge and the interests and abilities of the volunteer and included wildlife interpretation, adopt-a-trail, adopt-a-road, special events assistant, general maintenance, resource assistant and more. **3/98**

Windom Co-Sponsors Forum For Prescribed Burning of Habitat

Windom Wetland Management District
Prescribed burning in the spring to improve wildlife habitat is effective, but poorly understood by the public. Controversy and opposition have resulted from the lack of understanding concerning the need for fire on prairie habitat. A Forum on Prescribed Burning for wildlife was co-sponsored by the Windom Wetland Management District and the Cottonwood County Game and Fish League. The featured speaker was Professor Ken Higgins from the Wildlife Co-op Unit at South Dakota State University. **3/98**

Spring Prep Day Held At Sherburne National Wildlife Refuge

Sherburne National Wildlife Refuge
The annual Spring Prep Day held on April 18, 1998, at Sherburne National Wildlife Refuge was attended by nearly 200 volunteers. Individuals, families, scout, school and 4-H groups cleared litter from over 50 miles of county roads passing through the Refuge. Participants also raked leaves and washed windows at the Old School House and Refuge headquarters and worked on trail maintenance and erosion control projects. Following the projects, volunteers were provided a free lunch and an opportunity to take a guided bird tour on the Wildlife Drive. **4/98**

Sherburne Participates in Volunteer Recognition Week

Sherburne National Wildlife Refuge
Through the Volunteer Bridge, Sherburne National Wildlife Refuge joined with other government and private agencies in Sherburne County in preparing an interagency exhibit highlighting volunteer activity at each agency in recognition of National Volunteer Week, April 19-25. The exhibit, placed at the Elk River Library, was viewed by more than 3,000 people. **4/98**

80 Percent of Nesting Baskets Used by Waterfowl at Detroit Lakes WMD

Detroit Lakes Wetland Management District

A total of 109 nesting baskets have been placed in wetlands on Waterfowl Production Areas throughout the Detroit Lakes Wetland Management District. Of these, 48 were used by mallards to produce 384 ducklings and 35 were used by Canada geese to produce 234 goslings. The use of these nesting structures by both mallards and Canada geese has increased each year since they were first installed in 1987. The percent of basket success has gone from two percent in 1988 to 80 percent in 1997. Production has gone from 24 mallards and six Canada geese in 1988 to 384 mallards and 234 Canada geese in 1997. **4/98**

200 Students Compete in Envirothon - Area 2

Morris Wetland Management District

On May 7, 1998, Morris District staffers were presenters at the Area II Envirothon. There are five stations at which the students take a 20 point test. Morris staff created the test for the wildlife station. There were approximately 200 students who participated. The top three teams go to the State Envirothon which will be on May 20, 1998, at White Water State Park. **5/98**

Morris Area High School Careers Class

Morris Wetland Management District

On May 12, 1998, the Morris Area High School ninth grade students visited the office about career opportunities with the Service. Five classes, totaling 110 students that visited the office. **5/98**

Environmental Education Training for Teachers

Windom Wetland Management District

Fifteen Worthington, Minnesota, area teachers attended environmental education training in wetland values and wildlife management conducted by the Heron Lake Environmental Education Center. Training was completed on the Worthington Waterfowl Production Areas with the use of the EcoBus. **5/98**

Service Partners with Community on Waterfowl Productions Area Cleanup

Litchfield Wetland Management District

The Litchfield office coordinated with Albion Township resident, Sharol Rau, on a large cleanup project for Albion Waterfowl Production Area and the Libby Lake shore area. The Service paid hauling and disposal fees,

Albion Township donated a front end loader, and community volunteers provided the sweat and labor. On May 16, 1998, 37 volunteers committed 222 hours to collect over 6 tons of trash which had accumulated along the steep shoreline, including, furniture, tires, wire, containers, and appliances. The area will be re-posted and closely monitored to curb future dumping activities. **5/98**

50 Acres of Globally Endangered Habitat Restored

Sherburne National Wildlife Refuge

This project, completed through partnerships with Princeton High School and Refuge volunteers, reestablished the oak canopy into 50 acres of previously restored native prairie understory to re-create the globally endangered oak savanna vegetation type. The site was prepared by prescribed burning and the 500 local seed source bareroot mixed oak seedlings were hand planted with fertilizer. Planting seedlings is desirable because it accelerates the natural seeding which occurs very slowly in these grasslands because acorns do not fall far from the parent trees. **5/98**

Morris Hosts Sixth Annual Wetland Field Day

Morris Wetland Management District

On May 21, 1998, the Morris Wetland Management District staff held its sixth annual wetland field day. There were 160 second-grade students, teachers and parents that attended. Second graders from Morris, Chokio-Alberta, Cyrus and Starbuck schools participated. It was a day of interactive learning and fun. The students learn about wetland plants, invertebrates, wildlife, nesting structures, water quality, how glaciers formed the prairie pothole region, and predator prey relationships through a game of duck dodge ball. **5/98**

Prescribed Burning Record at St. Croix

St. Croix Wetland Management District

Working together with a local Department of Natural Resources office, the St. Croix Wetland Management District burned over 1,000 acres of grassland during the spring burning season, the highest total ever for us. Sites burned included Waterfowl Production Areas, private land and state land. Some of the private lands sites were native prairie remnants that had never been burned under prescription. Other burns were to establish and maintain native seedlings on public and private land. **5/98**

550 Miles of District Boundary Posting Underway

Fergus Falls Wetland Management District

Three Biological Technicians hired for the summer have begun the process of re-posting over 550 miles of boundary around 217 Waterfowl Production Areas in the Fergus Falls Wetland Management District. Past shortages in maintenance funds have not allowed the district to maintain these boundaries and the crew's efforts will result in better protection of these lands for nesting waterfowl. **6/98**

Agassiz Celebrates International Migratory Bird Day

Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge held an International Migratory Bird Day celebration on Saturday, May 16, 1998, on the Refuge. Events held included having the office open serving refreshments and goodies and giving away International Migratory Bird Day posters and Partners In Flight stickers. Six people stopped in the office. Refuge Operations Specialist Gary Tischer and local National Audubon Society member Jeanie Joppru led four people on a Refuge birding tour from 9 - 11:30 a.m. From 1- 4 p.m. Refuge Manager Margaret Anderson and Jeanie Joppru identified shorebirds for four people on Farmes Pool. **6/98**

Leafy Spurge Biocontrol Beetles Successful

Litchfield Wetland Management District

Leafy spurge beetles (*Aphthona lacertosa/A. czwalinae*) were released onto a native prairie Waterfowl Production Area in Kandiyohi, County, Minnesota. Monitoring in 1998 revealed high beetle numbers, good dispersal and lots of plant damage. From the release site, the beetles decimated the spurge in a circle nearly 30 feet across in one year and were found over 100 feet from the release post! **6/98**

Detroit Lakes Wetland Management District Restores 559 Acres to Prairie Grassland

Detroit Lakes Wetland Management District

The Detroit Lakes Wetland Management District restored 559 acres of old crop land into prairie grassland on nine waterfowl production areas and two national wildlife refuges during 1998. Most of the seed was harvested from local waterfowl production areas and processed at the Detroit Lakes Wetland Management District seed processing facility. Some of the forb (wildflower) seed was purchased with funds

donated by the Cormorant Lakes Sportsman's Club. Seventy acres were seeded by broadcasting the seed on snow-covered areas during the winter months. **6/98**

AmeriCorps Team Works on Rydell National Wildlife Refuge

Detroit Lakes National Wildlife Refuge

Eleven AmeriCorps members worked on the Rydell National Wildlife Refuge for three weeks in May and June. They planted 300 basswood trees, stained a 300- foot boardwalk and overlook, built bluebird houses and wood duck boxes, conducted waterfowl surveys, landscaped around the visitor center, improved three miles of hiking trails, and many other miscellaneous tasks that benefitted the Refuge. Much of the funding for the trail, boardwalk, and visitor center projects came as a grant from the Minnesota State Legislature to improve accessibility of the public use facilities on the Refuge. **6/98**

Public Use Facility Under Construction at Detroit Lakes Wetland Management District

Detroit Lakes Wetland Management District

The Detroit Lakes Wetland Management District has begun building a four-mile hiking, skiing and educational trail-overlook facility that will link the city of Detroit Lakes to Big Floyd Lake. The facility, which includes a deck and gazebo on the headquarters office and a boardwalk into the marsh, is expected to encourage at least 3,000 visitors to the facility each year. The trail will cross Minnesota Department of Natural Resources property and several tracts of private property. **7/98**

AmeriCorps Crew Completes Projects at Detroit Lakes Wetland Management District

Detroit Lakes Wetland Management District

An 11-member work crew from AmeriCorps in Denver, Colo., recently completed three weeks of construction at the Detroit Lakes, Minn., Wildlife Management District. While on the District, the crew removed a mile of old predator exclusion fencing, installed floor boards and applied sealer to the District office's deck, and built 215 feet of the headquarter's marsh boardwalk. The deck and boardwalk will eventually become part of a four-mile interpretive - recreational trail system that will allow people to hike and cross-country ski from the city limits of Detroit Lakes to Big Floyd Lake. An estimated 3,000 people will use the trail each year. **7/98**

City Youths, Public Hosted at Minnesota Valley National Wildlife Refuge Fishing Day

Minnesota Valley National Wildlife Refuge

More than 450 people, including 100 inner-city youths, recently learned fishing skills and ethics during a Pathways to Fishing Program at Minnesota Valley National Wildlife Refuge. The fishing day event, conducted annually since 1992, brought together 100 inner-city youths, and 350 other fishing enthusiasts to learn fishing skills and ethics. More than 80 volunteers and Refuge staff helped teach participants how to use rods and reels, proper casting and knot tying techniques, safety and fishing ethics, fish identification, and more. The youths also participated in a casting contest run by the Burger Brothers Outdoor Outfitters and learned fish management techniques. Following a fish fry provided by the Red Lake Nation, participants spent time catching largemouth bass and bluegill. Each youth received a fishing rod and reel and educational literature. In the afternoon the event was open for the first time to the general public with 350 people participating. Local families learned fishing techniques and practiced their skills at the Bass Ponds site. For many, it was their first fishing experience. **7/98**

Sixteen Moose Calves Captured and Collared

Agassiz National Wildlife Refuge

University of Idaho Ph.D. student Eric Cox, captured 16 moose calves with the use of Minnesota Department of Natural Resources helicopter between May 9 and 25, 1998. Six calves were captured at Red Lake Wildlife Management Area (one has since died); six at Agassiz National Wildlife Refuge, one at Thief Lake Wildlife Management Area and five in the Viking Agricultural Area. Plans are to treat half of these animals with treatments to prevent brain worm, liver flukes and winter deer ticks and monitor survival to yearling stage. **7/98**

Dedication of Bob Hautman Project

Litchfield Wetland Management District

Bob Hautman of Plymouth, Minnesota, was the design artist of the 1997-98 Federal Duck Stamp. In July 1997, the Service, the U. S. Postal Service, Minnesota Waterfowl Association, and the Lake Minnetonka Stamp Club sponsored a "Hometown Event" in honor of Mr. Hautman. Minnesota Waterfowl Association (MWA) sponsored a fund raiser in conjunction with the event. Numerous private individuals and companies donated works of sporting art, memorabilia, and other valuable items which were sold through a silent auction. \$4,791 was raised through the MWA-sponsored auction and dedicated to a waterfowl habitat restoration project. MWA and Pheasants Forever donated an additional \$3,236 for the project. Matching funds were contributed by the Service. The Service's new 311-acre Lake Lillian Waterfowl Production Area in Kandiyohi County, Minn., was selected by Mr. Hautman and the Service as the site for applying the raised revenue for waterfowl habitat restoration. Forty-five acres of wetlands were restored on the tract during fall 1997. In the spring of 1998, 61 acres of former croplands were seeded to native prairie grasses and forbs. On May 1, 1998, a dedication of the "Bob Hautman Habitat Restoration Project" took place. Regional Director Bill Hartwig was the keynote speaker of the dedication. Other speakers included Mr. Hautman, Service representatives, and local government officials. A highlight of the dedication was the unveiling of a brass plaque-cairn commemorating the project. **7/98**

***...checks totaling more than
\$20,600 were delivered to the
treasurers of the City of
LaCrosse, three towns in
LaCrosse County, Wis., and
Houston County, Minn.***

***- Revenue Sharing at
Upper Mississippi River NW&FR***

Minnesota Junior Duck Stamp Ceremony Draws a Crowd

Minnesota Valley National Wildlife Refuge

The ceremony was held at the Minnesota School of Environmental Studies in Apple Valley, Minnesota. Approximately 430 guests were on hand to honor Minnesota's young winners. Rebecca Latham who placed second in the National Competition, received special recognition. The winners received ribbons and awards. Among the many awards the students received were art supplies to encourage them in their artistic pursuits. Guest speakers included Nita Fuller, U.S. Fish and Wildlife Service and Warren Hanson, writer and illustrator. Diane Hedin, State Park Naturalist, provided a special program for the children called, "Song on the Wing." Visitors enjoyed both the Minnesota and National Junior Duck Stamp Exhibits. **7/98**

Northwest Minnesota Schools Receive Moose Books

Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge received a grant for the Moose Mystery Challenge which included funds for the Adopt-A-Moose program. A portion of those funds were to be used to purchase books on moose that would be donated to school libraries. Three titles were selected: "Moose for Kids," "Moose Country" and "Ecology and Management of the North American Moose." Nineteen elementary, middle and high schools in Thief River Falls, Hallock, and Warroad, Minn., received the books. Town libraries in Thief River Falls, Hallock, Warroad and Baudette received copies of "Moose for Kids" and "Moose Country." Book markers on the inside of the cover were designed to recognize the Adopt-A-Moose and Moose Mystery Challenge and included logos of the Service, Minnesota Department of Natural Resources and partners including the Hartz Foundation, Rice Area Sportsmen, and Wildlife Forever. **7/98**

Prescribed Burning Completed at Big Stone National Wildlife Refuge

Big Stone National Wildlife Refuge

Big Stone National Wildlife Refuge had a banner year for prescribed burning. Seventeen out of 23 units were burned for a total of 2,659 acres. These burns took place in Big Stone and Lac qui Parle Counties in April and May. **7/98**

More Than \$20,000 Shared with Towns in Wisconsin, Minnesota

Upper Mississippi River National Wildlife and Fish Refuge

Under the provisions of the Refuge Revenue Sharing Act, checks totaling more than \$20,600 were delivered to the treasurers of the City of LaCrosse, three towns in LaCrosse County, Wis., and Houston County, Minn. The Onalaska, Wis., board of supervisors voted to contribute the city's entire check of \$4,393 to the Upper Halfway Creek Marsh Project. This project will be built on the Refuge through a partnership involving the Service, Onalaska, Wis., and others. **7/98**

Twin Cities Tree Trust Completes Public Use Projects

Minnesota Valley National Wildlife Refuge

Minnesota Valley National Wildlife Refuge has partnered with Twin Cities Tree Trust for more than fifteen years to provide the labor for high priority public use projects. The organization is a non-profit whose objective is to provide skills to disadvantaged youth through outdoor recreation public projects in Hennepin and Dakota counties within the Twin Cities metropolitan area. **8/98**

Minnesota Congressman Tours Black Rush Lake Project

Windom Wetland Management District

An on-site briefing was held for Congressman David Minge concerning the Black Rush Lake Restoration Project. Restoration plans, partner involvement and land exchange approval was discussed in detail. **8/98**

Detroit Lakes Wetland Management District Staff Booth at County Fair

Detroit Lakes Wetland Management District

The Detroit Lakes Wetland Management District staffed a booth in the Natural Resources Building at the Becker County Fair during the week of August 12-15, 1998. An estimated 15,000 people viewed the booth. Visitors received information about the Service, Wetland District management activities, wetland restoration opportunities, wildlife, and other natural resources topics. **8/98**

Friends of Rydell Refuge Host Third Annual Open House

Detroit Lakes Wetland Management District

On August 2, the third annual Rydell National Wildlife Refuge Open House was hosted by the Friends of the Rydell Refuge. Horse-drawn wagon tours, displays, door prize drawings, refreshments and games were provided to more than 250 visitors. An "All School Reunion" of Maple Grove District 190, a country school formerly located on the Refuge, was a major attraction for the Open House. The horse-drawn wagons transported visitors to the site of the school. Former school members entertained the crowd with stories, songs, photos and other memorabilia from the school.

8/98

Church Groups Expand Maintenance Staff at Minnesota Valley Refuge

Minnesota Valley National Wildlife Refuge

Community Churches provided Minnesota Valley National Wildlife Refuge with extra hands three mornings a week. Five local churches brought supervised youth to the Refuge throughout the summer to help maintenance staff catch up on projects. The groups painted, picked up litter, helped with tree cleanup after storms, cleared gutters and parking lots, and removed trees and exotic species. **8/98**

Congressman Collin Peterson Visits Fergus Falls Wetland Management District

Fergus Falls Wetland Management District

Congressman Collin Peterson toured the Prairie Wetlands Learning Center and spoke at the Grand Opening on August 8, 1998. In addition, Mark J. Anderson, Senior Advisor and Josh Syrjamaki, Policy Liaison staffers from Senator Paul Wellstone's office toured the Center and were given a briefing on the Wetland Management District's Environmental Education Programs.

10 Additional Bird Species Now Nesting at Hamden Slough

Hamden Slough National Wildlife Refuge

Summer-long census on Hamden Slough National Wildlife Refuge has verified the first confirmed nestings of 10 additional bird species on the Refuge. Aaron Johnson, a biologist at the Refuge, completed the census. Johnson confirmed nests of black tern, red-necked grebe, pied-billed grebe, American coot, ring-necked duck, ruddy duck, redhead, Brewer's blackbird, cliff swallow and eastern phoebe. Three of these species -- ruddy duck, redhead and Brewer's blackbird -- were also the first confirmed nesting by that species in Becker County, Minnesota, and were reported to the Minnesota Ornithological Union. Many of the new nests were discovered at three of the Refuge's "big five" wetlands which were restored in 1995 using water control structures.

8/98

Externship for Educators Program Visits Litchfield

Litchfield Wetland Management District

"Externship for Educators," is a new program designed to help students learn what schooling, experience and job skills they need to get the jobs they want. Teachers interview professionals to learn how they achieved their positions and, using this knowledge, make changes in what or how they teach to better prepare students for the real world. Belgrade High School teacher Chad Peterson spent two days in the field with Refuge Operations Specialist Craig Lee learning how to get a job with the Service while assisting with spurge beetle monitoring and predator scent post surveys. **9/98**

Detroit Lakes Wetland Management District Restores 23 Wetlands on Private Land

Detroit Lakes Wetland Management District

The Detroit Lakes Wetland Management District restored 23 wetland basins during this fiscal year. These wetlands will eventually provide 28 more acres of water for nesting ducks when the basins fill up in the spring. **9/98**

Detroit Lakes Wetland Management District Hosts Waterfowl Expo

Detroit Lakes Wetland Management District

The Detroit Lakes Wetland Management District hosted its first Waterfowl Expo on the morning of September 12, 1998. Over 75 visitors participated in the youth duck calling contest, range estimation, waterfowl identification, retriever demonstrations, and steel shot patterning. In addition, visitors enjoyed the decoy carving demonstrations, antique decoy display and the 4-H food booth. **9/98**

Unique Refuge Partnership Helps Troubled Teens Learn 'Big Bs'

Hamden Slough National Wildlife Refuge

A unique partnership of Service National Wildlife Refuges and local groups recently completed its seventh year of working with troubled teenagers in northwest Minnesota. The Big "B" Program is used to motivate and teach teens enrolled at the Spring Hill Group Home through its motto: "Building Refuges, Benefitting communities, and Bettering lives." In 1998, 15 teens volunteered 575 hours on Tamarac and Hamden Slough National Wildlife Refuges, Maplewood and Glendalough State Parks in Minnesota, the new Prairie Wetlands Learning Center and the cities of Vergas and Lake Park, Minnesota. The summer program is funded by the State of Minnesota, and allows teens to work in a positive, supervised environment. **9/98**

Detroit Lakes Wetland Management District Harvests Prairie Seed Worth \$2 Million

Detroit Lakes Wetland Management District

An estimated 25,000 pounds of native grass and forb seed were harvested by the Detroit Lakes Wetland Management District during August and September 1998. The seed has an estimated value of \$2 million because of the amount and diversity of forb seed present. The seed will be used to seed 1,000 acres of old crop land into wildlife nesting habitat on public and private property during 1999. Partners in the effort include the Minnesota Department of Natural Resources, Hamden Slough National Wildlife Refuge, Devil's Lake Wetland Management District, private landowners, and several volunteers. **9/98**

Refuge's Environmental Education Days Hosts 800 Students

Sherburne National Wildlife Refuge

Sherburne National Wildlife Refuge and Sand Dunes State Forest were joint host sites for the annual Environmental Education Days attended by 805 fifth-grade students and 65 chaperones from 11 schools in Sherburne County on September 14-17, 1998. The event was coordinated cooperatively by Sherburne National Wildlife Refuge, the University of Minnesota Extension, Minnesota Department of Natural Resources-Forestry, and the Natural Resources Conservation Service. Refuge staff taught programs on Wildlife Management, the bald eagle, and friendly fire. Topics covered by the other agencies included forest management, soils, ground water, water usage and wetland values. **9/98**

Detroit Lakes Wetland Management District Prescribe Burns 8,924 Acres

Detroit Lakes Wetland Management District

The Service recently completed prescribed burnings on 8,924 acres of grasslands on 36 Waterfowl Production Areas scattered throughout four counties in northwestern Minnesota. The burns, conducted by the Service's Detroit Lakes Wetland Management District, ranged in size from four to 1,280 acres, and included more than 91 miles of fire line that needed control. Twenty-one private landowners cooperated with the Service by permitting their grasslands to be burned or allowing the burn crews to make fire lines on their property. The prairie grasslands were burned to enhance nesting habitat, prepare certain areas for seed harvest, and set back areas of encroaching woody vegetation. The burns occurred in the Minnesota counties of Becker, Clay, Mahanomen and Polk. **9/98**

Ducks Unlimited Helps Restore 14-Acre Wetland at Detroit Lakes District

Detroit Lakes Wetland Management District

Ducks Unlimited funded and supervised the construction of a water control structure that restored a 14.4-acre drained wetland on the Sieh Waterfowl Production Area in the Detroit Lakes Wetland Management District. The wetland will be filled with water next spring, complementing other wetlands on the Waterfowl Production Areas by providing habitat for nesting waterfowl and resident wildlife. **9/98**

\$26.9 Million Refuge Mitigation Package Approved

Minnesota Valley National Wildlife Refuge

On September 21, 1998, The Metropolitan Airports Commission overseeing the Minneapolis-St. Paul International Airport gave final approval of a \$26.9 million mitigation package to compensate the Service for impacts a new airport runway would have on the nearby Minnesota Valley National Wildlife Refuge. The agreement includes a minimum of \$20 million cash and additional compensation of up to \$6.9 million to relocate Refuge facilities and to defray increased operational costs. The agreement caps more than two years of negotiations between Service officials and representatives from MAC and the Federal Aviation Administration. Service officials had initially requested \$26.9 million to replace an estimated 4,000 acres of Refuge land and related programs and facilities. Final negotiations are expected to conclude within 60 days. **9/98**

784.4 Acres Acquired For Waterfowl Production Areas at Detroit Lakes

Detroit Lakes Wetland Management District

A total of 748.4 acres of land was purchased during Fiscal Year 1998 for the Detroit Lakes Wetland Management District's Waterfowl Production Areas. The wetlands will be restored and the uplands seeded into prairie grasses and forbs to provide nesting habitat for waterfowl and other ground nesting birds. Many other birds and resident wildlife will also benefit from this expanded habitat base. Since the areas will be open to hunting, trapping, wildlife observation, and other public use activities, the public will also directly benefit from the expanded opportunities available on these new Waterfowl Production Areas. **9/98**

Partner-Funded Nature Programs Presented to 355 at Rydell National Wildlife Refuge

Detroit Lakes Wetland Management District

With funding from the Maple Lake Improvement Association and the Union Lake Sarah Improvement Association and hosting by the Friends of the Rydell Refuge, six nature programs were presented at the Rydell National Wildlife Refuge during the year. More than 355 people learned about bats, dog sledding, prairie song birds, reptiles and amphibians, natural fabric dying, and butterflies. In addition, the participants also were exposed to displays about the Fish and Wildlife Service and the Rydell National Wildlife Refuge. **9/98**

Two Detroit Lakes District Staffers Recognized for Life-Saving Efforts

Detroit Lakes Wetland Management District

On May 7, 1998, Tractor Operator Dave Davis and Forestry Technician Jay Cucci were driving to Moose Lake, Minnesota, when they narrowly avoided being struck by an oncoming car which crossed into their lane. The car struck a truck that was traveling immediately behind them on the highway. Davis and Cucci summoned emergency assistance by calling 911, rendered first aid to both drivers and extinguished two fires that were started from the crash. Dave and Jay were given Exemplary Act Awards from Service Director Jamie Rappaport Clark for their efforts, which were above and beyond the call of duty. **9/98**

1998 Predator Scent Post Surveys Completed

Litchfield Wetland Management District

Litchfield Wetland Management District assisted the Minnesota Department of Natural Resources with predator scent post surveys for the 15th year in Meeker and Kandiyohi Counties. The same 11 routes of 10 stations (110 stations) were again completed by Wetland Management District staff and volunteers. Stations of soft sand and a scent disc were constructed at one-third mile intervals and any tracks left were keyed out the next day. Data is collected statewide and is analyzed annually, providing estimates on the rise, fall and range changes of mammalian predators and other incidental species. **9/98**

***Over 70 wetlands, totaling
200 acres, have been restored
in Otter Tail, Grant and
Douglas Counties by the
Fergus Falls Wetland
Management District...***

***- Private Lands
Accomplishment***

Agassiz Hosts Open House Day for National Wildlife Refuge Week

Agassiz National Wildlife Refuge

Four staff members were available to the public celebrating National Wildlife Refuge Week during Agassiz National Wildlife Refuge's "Waterfowl Extravaganza" open house on Sunday, September 27, 1998. Two videos, "1998 U. S. Fish and Wildlife Service and Canadian Wildlife Service Waterfowl Breeding Survey and Fall Flight Forecast," and the 1998 Ducks Unlimited - produced "Snow Goose Peril," were shown continuously throughout the day. Two Refuge-staffed guided bus tours were also given, where many ducks, Canada geese, sandhill cranes and other wildlife were observed. Seventy-five people attended the open house with 55 of the people taking the guided bus tours. Donuts, cookies and refreshments were served during the event. The open house educated people about the Refuge, management practices and the connection between all national wildlife Refuges. National Wildlife Refuge Week 1998 posters, National Wildlife Refuge tatoos, book marks, folders, and maps, and 1998 Wolf Awareness posters were given away during the celebration. **9/98**

Fergus Falls Wetland Management District Restores 200 Acres of Wetlands

Fergus Falls Wetland Management District

Over 70 wetlands have been restored in Otter Tail, Grant and Douglas Counties by the Fergus Falls Wetland Management District under the Private Lands Program. The wetlands were either restored by the Service or by other agencies or groups with the Service providing technical assistance. **9/98**

New Signs Added to Mark Boundaries, Inform Hunters at Fergus Falls

Fergus Falls Wetland Management District

The Fergus Falls Wetland Management District completed phase I of its major boundary marking project. Staff from the station spent three months posting more than 100 miles of boundary on 47 Waterfowl Production Areas. In addition, more than 120 parking lots were posted with signs informing hunters of the new nontoxic shot requirements for those using the Waterfowl Production Areas. This project required replacing 868 posts and 1,167 signs over the five-county Wetland Management District. **9/98**

Exotic Plant Species Controlled on 50 Fergus Falls Waterfowl Production Areas

Fergus Falls Wetland Management District

The Fergus Falls Wetland Management District controlled 2,800 acres of exotic plant species including leafy spurge, plumeless and Canada thistle as well as spotted napweed on over 50 Waterfowl Production Areas. Control effort include mowing, biological controls (insects) and herbicides. These efforts are directed at exotic species invading native prairie or native grass restorations in an effort to maintain the health and diversity of these grasslands. **9/98**

Wildlife Inventoried at Fergus Falls Wetland Management District

Fergus Falls Wetland Management District

The Fergus Falls Wetland Management District completed a variety of wildlife surveys and censuses during 1998. These include the four square mile pair counts, which gives and indication of district-wide waterfowl populations; the scent post surveys to show the presence and abundance of predator populations; prairie chicken booming ground counts to monitor the number of breeding males; and frog surveys to locate deformed frogs on Waterfowl Production Areas. **9/98**

Wetland Drawdown Program Enhances Waterfowl Brood Habitat

Fergus Falls Wetland Management District

Eleven wetlands totaling 450 acres at the Fergus Falls Wetland Management District have been placed in drawdown to enhance their value for breeding waterfowl. In addition, four water control structures have been replaced and one outlet channel cleaned to enhance water management on 375 acres of wetlands for waterfowl. When wetlands are placed in drawdown nutrients are recycled and emergent vegetation grows creating ideal brood habitat for a variety of water birds. **9/98**

275 Acres of Native Grasslands Restored Across Five-County District

Fergus Falls Wetland Management District

The Fergus Falls Wetland Management District staff seeded 275 acres of native grass on Waterfowl Production Areas, Wildlife Management Areas and Reinvest in Minnesota (RIM) agreements across the five-county area. In addition, private lands staff assisted Natural Resources Conservation Service and private land owners with recommendations for native grass seeding on over 1,000 acres in the same area. Grass was harvested from native prairies within the Wetland Management District, then cleaned and mixed with purchased seed to seed these acres. Intensive management of this cover will result in excellent waterfowl and nongame bird nesting habitat. **9/98**

Habitat-Saving Parking Lots Completed

Fergus Falls Wetland Management District

The Fergus Falls Wetland Management District installed 12 parking lots on 12 Waterfowl Production Areas throughout the five-county District. The parking lots eliminate unsafe roadside parking for the public using the WPAs for hunting, wildlife observation and other public uses. These parking lots also prevent destruction of valuable nesting habitat as well as a site for information and interpretation about the WPAs. **9/98**

Wetland, Upland Acreage Designated for Acquisition

Fergus Falls Wetland Management District

Biologists from the Fergus Falls Wetland Management District prepared delineations for 260 acres of fee title and 1,280 acres of easement lands for acquisition under the Small Wetlands Program. Delineations are based on the biological value of these tracts to nesting waterfowl as well as other valuable natural communities. **9/98**

Service Joins Partners to Promote Minnesota Birding Corridor

Detroit Lakes Wetland Management District

A coalition of five Minnesota communities, six facilities operated by the Service, Minnesota Department of Natural Resources and the Lakes Area Birding Club have joined together to promote birding activities in northwestern Minnesota. A color brochure will be produced in the near future to highlight the best birding opportunities available along a 230-mile corridor that runs from the Minnesota communities of

Fergus Falls in the south, to Warroad in the north. The brochure will enable both avid and novice bird watchers to more readily find birding hot spots in northwestern Minnesota and help communities become more "birder friendly" as they promote their communities. **9/98**

Volunteers Donate 3,381 Hours at Detroit Lakes Wetland Management District

Detroit Lakes Wetland Management District

Seventy-seven volunteers contributed 3,381 hours to the Detroit Lakes Wetland Management District program in Fiscal Year 1998. Volunteers worked on waterfowl surveys, wetland and upland restorations, prescribed burning preparation, Waterfowl Production Area boundary posting, outreach, and construction of public use facilities. Several of these projects would not have been possible without the assistance of volunteers. Volunteers contributed an estimated \$33,810 worth of labor to the Detroit Lakes Wetland Management District during the year. **9/98**

Switchgrass Seed Harvest Exceeds Expectations

Litchfield Wetland Management District

Due to a high demand for switchgrass (*Panicum virgatum*), seed prices have skyrocketed. To keep grassland restoration prices down, Litchfield Wetland Management District harvested seed on two burned fields totaling 40 acres. The yield was extremely good with nearly 20,000 pounds of bulk seed harvested. Cleaned, we expect 15,000 pounds at 75 percent or more of pure live seed (PLS). Switchgrass is currently selling for around \$10 per pound PLS. **9/98**

Volunteers Work 3,551 Hours on Rydell National Wildlife Refuge

Rydell National Wildlife Refuge

Nintey-seven volunteers contributed 3,551 hours to Rydell National Wildlife Refuge programs during Fiscal Year 1998. They assisted with waterfowl surveys, upland habitat restoration, nesting structure construction and maintenance, a deer hunt for people with disabilities, a youth deer hunt, public use facility construction, special events, outreach, and general administration. Many of these projects would not have been possible without the help of dedicated volunteers. **9/98**

Black Rush Lake Restoration Project Approved

Windom Wetland Management District

Funding and approval were recently finalized for the restoration of the 980-acre Black Rush Lake Waterfowl Production Area. This project will result in the restoration of the drained, 357-acre Black Rush Lake basin and surrounding upland nesting habitat. Eleven organizations have cooperated in funding this project. Resulting benefits include public recreation, flood water retention, improved water quality and wildlife habitat. **9/98**

Wildlife Stewardship Award Presented to Dr. Scott Kuecker, Ducks Unlimited

Windom Wetland Management District

The Windom Wetland Management District presented its annual Wildlife Stewardship Award to Dr. Scott Kuecker for his dedication and leadership in establishing the Black Rush Lake Waterfowl Production Area. Dr. Kuecker raised necessary funding to complete a key land exchange, essential for the restoration of the 357-acre drained Black Rush Lake basin. He also worked with his congressional representative and aides to obtain timely approval for this land exchange. Dr. Kuecker is president-elect of the Marshall Chapter of Ducks Unlimited. **9/98**

Upland Habitat Restored on 656 Acres on Private Land

Windom Wetland Management District

Locally adapted native grass was planted to restore upland habitat on private land at 29 sites for a total of 656 acres. **9/98**

300 Wetland Acres Restored on Private Lands

Windom Wetland Management District

45 wetlands totaling 303 acres were restored on private lands through the Partners for Wildlife Program. **9/98**

Conservation Clubs Assists in Purchase of Waterfowl Production Area

Windom Wetland Management District

Two local conservation clubs, Pheasants Forever and Cottonwood County Game and Fish League, provided funding to rent and extend a purchase agreement for a 160-acre tract, which enabled the Service to acquire the property as a Waterfowl Production Area. **9/98**

\$50,000 Grant Awarded for Black Rush Lake Restoration

Windom Wetland Management District

A North American Wetlands Conservation Act Grant of \$50,000 was awarded to the Windom Wetland Management District for the development of the Black Rush Lake Restoration Project. Native grass habitat will be reestablished on 570 acres in 1999. **9/98**

Windom Wetland Management District Hosts Grassland Management Workshop

Windom Wetland Management District

Windom Wetland Management District hosted a Native Grass/Forb Management Workshop. The purpose was to assemble land managers to share field experience concerning native grass seed harvest, planting and weed control to preserve forb diversity. Land managers from four department of natural resources offices and two Service offices attended. **9/98**

\$4.2 Million Wetlands Conservation Grants Approved for Service Partners

Joint Venture Office

The Migratory Bird Conservation Commission recently approved five North American Wetlands Conservation Act (NAWCA) grants for five projects within Region 3, U.S. Fish and Wildlife Service. The grants total \$4,239,593 and will be used to help Service partners acquire, restore and/or enhance 32,500 acres of wetlands and associated upland habitats in Missouri, Minnesota, Wisconsin and Indiana. The Four River II wetland project will improve over 9,000 acres in the Osage River basin of Missouri. The Heron Lake IV project will continue restoration work in that Minnesota watershed. The Wisconsin Coastal Initiative II will restore wetlands in 13 counties in southeast Wisconsin. The Superior Coastal project will protect Lake Superior wetlands in northern Wisconsin. The Grand Kankakee III restoration project continues acquisition and restoration work in the Kankakee watershed of northwest Indiana. Partners in the projects include Missouri Department of Conservation, Ducks Unlimited, the Minnesota, Wisconsin and Indiana Departments of Natural Resources, Bad River Band of Chippewa Indians, The Nature Conservancy and Indiana Heritage Trust. The Service's Region 3 consists of the States of Minnesota, Wisconsin, Michigan, Ohio, Illinois, Indiana, Missouri and Iowa. **9/98**

Partners In Flight Publishes First Bird Conservation Plan

Joint Venture Office

In August 1998, Partners In Flight published its very first Bird Conservation Plan. This plan, completed with assistance from the Joint Venture Office and Regional Nongame Bird Coordinator, covers the Northern Tallgrass Prairie physiographic region. This nongame bird plan will be an excellent tool for partner groups who deliver habitat conservation projects, such as the Joint Venture. All partners now have a single source of information on how to maximize nongame bird benefits on their habitat acquisition and restoration projects. **9/98**

Agassiz Refuge Hosts Envirothon Natural Resources Competition

Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge and Soil and Water Conservation District Offices from five northeastern Minnesota counties organized an Envirothon for the region's high school students, hosted at the Refuge. The Envirothon is an outdoor natural resource knowledge bowl held annually in most states with local, state and national competition to expose high school youth to natural resources they normally are not exposed to in a classroom. Donators for T-shirts, medallions, can coolers and a trophy included the five Soil and Water Conservation Districts and 21 other organizations and businesses from northwestern Minnesota. Donations totaled \$1,875 **4/98**

Greater Prairie Chicken Sighted on Waterfowl Production Area

Litchfield Wetland Management District

On February 11, 1998, two District personnel reported seeing a grouse-like bird fly out of a small box elder tree on the Schaefer Waterfowl Production Area in south-central Kandiyohi County. Upon returning to the District office, they consulted the field guides and concurred that it was indeed a greater prairie chicken (*Tympanuchus cupido*). Local birding enthusiasts were contacted, investigated the area, and observed the bird perching in the same tree three days later. This is the first chicken seen in Kandiyohi County in many years, probably migrating through a bit farther east than most of its relatives. **2/98**

Boy Scout Troop 353 Builds Wood Duck Boxes

Litchfield Wetland Management District

Boy Scout Troop 353 from Litchfield, Minnesota, constructed 16 high-quality cedar wood duck nesting boxes on February 21, 1998, for distribution by the Litchfield Wetland Management District. They plan to construct a total of 50 structures with materials that were left over from the 1998 Duck Habitat Day held at the Minneapolis Convention Center in January. The materials were donated by Gander Mountain. **2/98**

'Sentenced to Service' Crew Builds Henhouse on Waterfowl Production Area

Litchfield Wetland Management District

The Minnesota Department of Corrections "Sentenced to Service" crew of Meeker County assisted the Litchfield Wetland Management District office in building over-water nesting structures (hen houses). The crew cut used carpet into the 3 x 4.5- foot pieces used to protect nesting waterfowl from sun, wind, rain, and avian predators. They then used the carpet, 1,400 feet of woven wire fencing and a stack of native grass hay bales to produce 130 hen houses. These nesting structures will be placed in open water marshes on local WPAs and possibly on private land wetland restorations. **2/98**

Last Captures of Three-Year Moose Study Completed

Agassiz National Wildlife Refuge

The last capture of moose as part of a three-year study into investigating the dramatic decline in moose numbers in northwest Minnesota, occurred March 6-12. Thirty animals were captured in the three study sites: Agassiz National Wildlife Refuge, Red Lake Wildlife Management Areas, and Viking Agricultural Area. The moose were captured by using a helicopter and a net gun. Radio collars were placed on 21 new cows and one new yearling. Seven recapture cows and one yearling had old collars replaced. Blood samples were taken from all animals for pregnancy and lab screens for disease and nutritional screening. There are 81 collared animals in the study sites: Agassiz National Wildlife Refuge 30; Red Lake WMA 19; Thief Lake WMA 8; Viking Agricultural Area 24. **3/98**

Big Stone National Wildlife Refuge Designated as 'Globally Important Bird Area'

Big Stone National Wildlife Refuge

Big Stone National Wildlife Refuge qualifies as a Globally Important Bird Area in American Bird Conservancy's U.S. Important Bird Area's program. Specifically, it provides habitat for more than seven percent of the eastern prairie population of Canada geese during fall migration. It also provides habitat for a continentally significant number of mallards during fall migration. **2/98**

Refuge Partnership Banquet Recognizes Contributions of 200 Volunteers

Upper Mississippi River National Wildlife and Fish Refuge

The second annual joint Refuge and LaCrosse Fishery Resource Office volunteer banquet was held on January 23, 1998. More than 60 people attended the event which was held to honor the nearly 200 volunteers who contributed more than 4,700 hours to the two Divisions during 1997. The "Volunteers of the Year" were Donald Schroeder (Refuges) and Bob Ruud (Fisheries), both had more than 250 hours each during the year. Special recognition awards were given to the Friends of the Upper Mississippi River Refuges, Western Wisconsin Technical College, Dresbach Information Area, and Southern Bluffs. **1/98**

Mallard Nesting Structures Located Using Global Positioning System

Tamarac National Wildlife Refuge

Lowell Deede, Tamarac National Wildlife Refuge, provided assistance to Dave Rave, Minnesota Department of Natural Resources, in collecting location coordinates for 54 of 130 mallard nesting structures in Grant County, Minnesota. A precise, lightweight Global Positioning System receiver was used to collect the data. The data will be added to Minnesota Department of Natural Resources's Geographic Information System. **1/98**

Service Staff Help Judge Science Fair Projects

Morris Wetland Management District

Darrell Haugen, Kenton Moos, and Chad Raitz from the Morris Wetland Management District office judged science fair projects at Morris High School. There were over 200 students with projects. Some of the projects will go on to the state competition. **1/98**

Wetland District Manager Interview Airs on Statewide Radio Program

St. Croix Wetland Management District

Wetland District Manager Steve Delehanty was the guest on a popular Wisconsin Public Radio talk show. The show featured discussion about the Refuge system nationwide and particularly about Wisconsin's Refuges. Listeners called to ask questions about Refuges and the Refuge system. **10/97**

Two New Waterfowl Production Area Tracts Acquired

St. Croix Wetland Management District

St. Croix Wetland Management District purchased two tracts of high-quality habitat to enlarge existing Waterfowl Production Areas in Dunn County, Wisconsin. The land will increase the amount of wetland and upland habitat protected and dedicated to migratory birds and will also provide additional wildlife-dependent public recreation. **1/98**

Waterfowl Partners Hire Biologist to Promote Wetland Reserve Program

St. Croix Wetland Management District

Natural Resources Conservation Service, Wisconsin Waterfowl Association and the Service partnered to hire a biologist dedicated to promoting the Wetland Reserve Program in Wisconsin. Biologist Jim Reimer was hired by the WWA and will spend at least the next year and a half restoring wetlands and enrolling land into the Wetland Reserve Program. The NRCS contributed funding, and the Service is providing work guidance, office space, and administrative support. **12/97**

Minnewaska Area High School Field Trip

Morris Wetland Management District

District staff gave a presentation on wetlands and native prairie to three eighth-grade classes from the Minnewaska Area High School. There were approximately 70 students. The event was a field trip at Glacial Lakes State Park. **12/97**

250-Acre Wetland Restored

Wisconsin Private Lands Office

Wisconsin Private Lands Office, through the Partners for Wildlife Program, provided survey and design for two water control structures and two ditch plugs to restore 250 acres of flood plain and riparian wetlands on Wisconsin Department of Natural Resources property in south central Wisconsin. Called the "Dead River Project," the area hosts a large cut-off stream meander in the center of the restored wetland complex. The project's cost of \$7,900 was funded by Ducks Unlimited. **11/97**

91,000 Pounds of Prairie Seed Cleaned at Detroit Lakes Wetland Management District

Detroit Lakes Wetland Management District

More than 91,000 pounds of native grass and forb seed from five Wetland Management Districts, two national wildlife Refuges, and four Minnesota Department of Natural Resources stations were cleaned at the Detroit Lakes Wetland Management District's seed cleaning facility during the fall of 1997. This seed, which has an estimated retail value of \$819,000, will be used to establish 5,600 acres of native prairie habitat for nesting waterfowl and other wildlife on federal waterfowl production areas, national wildlife Refuges, state wildlife management areas, and White Earth Tribal lands. **11/97**

Minnesota Congressman Visits the Litchfield Wetland Management District Office

Litchfield Wetland Management District

Congressman David Minge visited the Litchfield Wetland Management District Friday, December 5, 1997. During the 45-minute visit, Minge and his aide Shelly Zagaros, familiarized themselves with the function and operations of the Service offices in Litchfield. Congressman Minge met all staff who were present, took a quick tour of our meager office setting, and then spent the bulk of his time asking questions about our various programs and receiving briefs on Service programs and challenges. Topics we covered during the visit included Refuge revenue sharing payments, weed control, wetland delineation, wetland mitigation, maintenance of drainage systems, outreach and environmental education. **12/97**

American Bittern Program Presented During Meeting

Rice Lake National Wildlife Refuge

Rice Lake Refuge staff presented a program on American bittern research he completed at Agassiz National Wildlife Refuge. The program was given at the Minnesota Ornithologist Union annual meeting at the Bell Museum in St. Paul, Minn. **12/97**

Service, Electric Company Restore Osprey Nest Platform

Rice Lake National Wildlife Refuge

When an abandoned power pole supporting an osprey nest fell over on his property, Jon Sampson, an Aitkin County, Minnesota, landowner became concerned for the effects on the osprey. Mr. Sampson contacted Rice Lake Refuge and Mille Lacs Electric Cooperative in an effort to replace the nest pole. Rice Lake Refuge built a nest platform and Mille Lacs Electric mounted the platform on a power pole, which was then installed on Mr. Sampson's property at the old nest site near Wilkins Lake. **12/97**

Northern Tallgrass Prairie Habitat Preservation Area Open House

Morris Wetland Management District

On October 8, 1997, Jane West, Tom Larson, and Howard Lipke from the Service's Regional Office and Alfred Radtke and Bernard Angus from Morris Wetland Management District, held an Open House for comments on the draft Environmental Impact Statement for the Northern Tallgrass Prairie Habitat Preservation Area. The open house was held at the Morris Wetland Management District office. Ten people attended and a local radio and television station covered the event. **10/97**

Fergus Falls Wetland Management District Undergoes Aviation Safety Review

Fergus Falls Wetland Management District

The Fergus Falls Wetland Management District along with the Habitat and Population Evaluation Team Office underwent an aircraft operations review on November 19, 1997. The review included not only the safety of station aircraft operations, but suggestions to make aircraft operations more user-friendly. Suggestions included making more local aviation operations available to field stations whose needs come at the same time and for the same operator. Result of the review will be sent to the offices reviewed. **11/97**

Litchfield District Point Count Summary

Litchfield Wetland Management District

Point count surveys have been conducted in June on Waterfowl Production Areas in prairie and seeded grassland habitats from 1994 through 1997. Three hundred seventy-five surveys were completed on 135 points on 16 WPAs in northwestern Kandiyohi county by experienced local birders. One hundred eight bird species were heard or seen and documented from the points, and many other species were observed in nearby habitats. Woodland species were more prevalent than expected, probably due to fragmentation and degradation (tree and brush invasion) of grassland habitat. Some rare species (Cerulean warbler, Henslow's sparrow) and species considered out of their range (veery, olive-sided flycatcher, ovenbird, red-bellied woodpecker) were seen. **11/97**

Rare Birds Sighted in Litchfield District

Litchfield Wetland Management District

During the last few years, many rare or locally uncommon birds, some state or federally listed species, have been spotted in the District by staff and local birders. Some of these have been seen during June point count surveys conducted in Waterfowl Production Area grassland habitats from 1994 through 1997. Most are incidental sightings. Listed species sighted include the American white pelican; trumpeter swan; bald eagle; peregrine falcon; red-shouldered hawk; marbled godwit; Franklin's gull; common, Forster's and black terns; short-eared owl, loggerhead shrike, cerulean warbler and Henslow's sparrow. Other locally uncommon species seen include the Western grebe, harlequin duck, sandhill crane, American avocet, boreal owls and yellow-throated warbler. **11/97**

Public Input Sought for Conservation Plan

Fergus Falls Wetland Management District

The Fergus Falls Wetland Management District held a public open house the evening of November 18, 1997, to solicit public input on preparation of a Comprehensive Conservation Plan directing management of the District over the next 15 years. Attendance was light but those attending supported the Service's existing acquisition, land management, and public use programs. Specific comments included expanding the operations of the Prairie Wetlands Learning Center and continuing to restore wetlands and grasslands both on and off

Service lands. Plan writing will begin once similar meetings are held at the other four districts in Minnesota with completion of a draft scheduled for June 1998. At that time, the plan will be submitted to the public for additional review and comment. **11/97**

Fergus Falls District Restores 67 New Wetlands

Fergus Falls Wetland Management District

The Fergus Falls Wetland Management District restored 67 new wetlands, and repaired dikes or dams on 22 additional wetlands damaged as a result of spring flooding in 1997. These 89 wetlands are spread across Grant, Douglas, Otter Tail, and Wilkin Counties in west central Minnesota. The restored wetlands will provide breeding and brood rearing habitat for waterfowl such as mallard, blue winged teal, shoveler, green winged teal, canvasback, and redhead. Other species benefitting from this work include upland plover, long billed marsh wren and black tern. Forty-seven of the wetland restoration/repairs are located on federal waterfowl production areas, with 42 located on private lands. **11/97**

Fergus Falls, Minnesota DNR Work to Restore Prairie Sites

Fergus Falls Wetland Management District

The Fergus Falls Wetland Management District in cooperation with the Minnesota Department of Natural Resources AmeriCorp program are restoring prairies in western Minnesota. Many of these native prairie sites have been protected from fire or disturbed, permitting invasion by exotic tree species. The Department of Natural Resources AmeriCorp crews will be removing or "girdling" these trees, permitting the habitats to return to open prairie grassland. **11/97**

Red River Valley Flood Damage Repairs Began

Fergus Falls Wetland Management District

This past fall, staff from the Fergus Falls Wetland Management District began repair of facilities damaged during the severe 1997 spring flood. Repairs were made to public use facilities such as access trails, parking lots, and boundary fences. In addition, 37 staff gauges damaged by high water and ice were replaced on wetlands to increase waterfowl production. The station is also conducting surveys and collecting information for the repair next spring of more than 15 water control structures and dikes that were damaged during the 1997 spring flood. These repairs will allow the station to manage these wetlands as breeding pair and brood habitat for ducks and geese. **11/97**

Fergus Falls Wetland Management District Prepares for Controlled Burning

Fergus Falls Wetland Management District

The Fergus Falls Wetland Management District installed over 7.5 miles of firebreaks during the fall of 1997 to permit controlled burning on more than 1,500 acres of prairie grasslands during the spring of 1998. Prairie grasslands evolve in a fire-dominated ecosystem. Controlled burning duplicates this natural process invigorating the stands of grasses and wild flowers to provide excellent wildlife cover. Controlled burns at the station will begin in April 1998. **11/97**

Corporate Workshop Held for North American Waterfowl Management Plan

Joint Venture Office

On November 17-18, 1997, Joint Venture Coordinator Jim Leach attended a "corporate sponsorship" workshop hosted by Phillips Petroleum Corporation. Phillips is an active partner in the Playa Lakes Joint Venture, and wanted to get more involved in assisting other joint ventures achieve the goals of the North American Waterfowl Management Plan. Phillips has agreed to serve as a mentor to the Upper Mississippi River/Great Lakes Region and Prairie Pothole Joint Ventures. Phillips will assist the Joint Venture Coordinators in establishing relationships with other corporations and better understanding their needs, so that these corporations can become active partners in achieving the objectives of the North American Waterfowl Management Plan. **11/97**

Fourteen Youths Hunt Deer on Rydell National Wildlife Refuge

Detroit Lakes Wetland Management District

On the weekends of November 8-9 and 15-16, 1997, 14 hunters, ages 12 to 15, and their mentors participated in the youth deer hunt on the Rydell National Wildlife Refuge. The young hunters and mentors had recently completed more than 14 hours of hands-on training that focused on developing deer hunting skills and responsible hunting behavior. Each hunter was accompanied by a mentor during the training and into the field during the hunt. The mentors were parents, grandparents, firearms safety instructors, and other volunteers who donated their time and hunting expertise to help the young hunters have a good, quality, educational, and enjoyable hunting experience. The mentors were not allowed to hunt. Instead, they provided guidance to their youth hunters. The young hunters had the opportunity to hunt deer on the Refuge during one of the November weekends and each hunter could harvest one deer. Unfavorable weather and fewer deer on the Refuge made seeing and bagging deer somewhat more difficult than during the youth hunt of 1996. By the end of the two weekends, 6 of the 14 hunters had bagged a deer, for a success rate of 43 percent. **11/97**

Waterfowl Numbers Peak - 5,000 Ringnecks, 16,000 Mallards

Rice Lake National Wildlife Refuge

Fall migration duck numbers at Rice Lake National Wildlife Refuge peaked at 45,000 ring-necked ducks and 16,000 mallards during October and early November. **10/97**

Region 3 Hydro-Axe Used to Manage Refuge Habitat

Rice Lake National Wildlife Refuge

The Region 3 hydro-axe was used to mow over brush and young trees on 49 acres on Rice Lake National Wildlife Refuge to provide improved habitat for songbirds, woodcock, and resident wildlife species. Cutting brush and young trees with the hydro-axe is used with prescribed burning and rotational haying to maintain large blocks of early successional habitat for songbirds and resident wildlife. These management techniques are also used to maintain roosting, feeding, and nesting habitat and singing sites for American woodcock. **10/97**

Refuge Display Part of 12th Annual Winona Wildlife Art Expo

Upper Mississippi River National Wildlife and Fish Refuge

A three-day art festival and sale attracted dozens of wildlife artists from Minnesota, Wisconsin, and Iowa to Winona, Minn. A display was set up and staffed by Refuge staff and volunteers from Friends of the Upper Mississippi River Refuges. Approximately 450 people stopped by the display during the course of the weekend and almost 100 membership applications for the Friends were handed out to interested persons. **10/97**

Refuge Reaches Out to 11 Wisconsin Schools

Upper Mississippi River National Wildlife and Fish Refuge

Programs about the Refuge were presented during National Wildlife Refuge Week to 1,290 students at eleven schools in Holmen, Onalaska, LaCrosse, and Stoddard, Wisconsin and one Cub Scout pack of 10. Staff also set up a display at the Minnesota Department of Transportation Information Area at Dresbach and talked to over 300 travelers in a four-hour period. A seminar regarding projects occurring on the Refuge was presented at the Visitor Center by the District Manager to nearly 30 participants. **10/97**

District Staff Presents Tallgrass Prairie Preserve to Moorehead Audubon Society

Morris Wetland Management District

Staff from Morris Wetland Management District gave a presentation to a local chapter of the Audubon Society in Moorehead, Minnesota. Objectives of the North American Tallgrass Prairie Habitat Preservation Area were explained and the draft Environmental Impact Statement discussed. They also spoke on native prairie, its management and associated plants and wildlife. Approximately 40 people attended. **10/97**

25 Wood Duck Boxes Installed on Refuge

Hamden Slough National Wildlife Refuge

An Eagle Scout service project was approved to install 25 biologically controlled wood duck boxes. A tree swallow nesting box was attached to the wood duck box to reduce nest competition and stress on the wood ducks from other cavity nesting birds, particularly starlings. The tree swallows will allow the female wood duck to have her cavity, but will keep all other birds away from both nests. **11/97**

North American Waterfowl Management Plan's Outreach Project Report Available

Joint Venture Office

In 1996, the International Association of Fish and Wildlife Agencies was provided a federal grant to initiate an outreach effort to expand North American Waterfowl Management Plan partnerships. Conducted by D.J. Case & Associates, the study involved nationwide market research, and selected two joint ventures as test sites for the initiative. The final report and handbook are now available, entitled "Expanding the Reach and Resources of the North American Waterfowl Management Plan." The report cites outreach planning and action items for the Upper Mississippi River/ Great Lakes Region and Prairie Pothole Joint Ventures, which will assist in expanding partnerships and dollars to meet the objectives of the North American Waterfowl Management Plan. **11/97**

Litchfield Districts Assists Minnesota DNR With Predator Scent Post Surveys

Litchfield Wetland Management District

The Litchfield Wetland Management District recently completed the 1997 Fall Predator Scent Post Surveys, the 14th season of assisting the Minnesota Department of Natural Resources with this statewide annual survey. The data collected provides valuable information on the rise, fall and range changes of mammalian predators and other species. This year, staff and volunteers ran eleven, ten-station routes in Meeker and Kandiyohi Counties. Stations are constructed roadside at one-third mile intervals and consist of a one-meter diameter pad of soft, moist sand with a scent disc placed in the middle. Any tracks found the next day are identified by route personnel using track keys. In 1997, more than a dozen species left tracks on the District's stations. **10/97**

80 Acres Added to Red Cedar Waterfowl Production Area

St. Croix Wetland Management District

A landowner accepted an offer to sell 80 acres to the Service to expand the Red Cedar Waterfowl Production Area in Dunn County, Wisconsin. **11/97**

First 15 Wetlands in North Star 2000 Completed

Hamden Slough National Wildlife Refuge

The first 15 wetlands of 225 to be restored were completed in the North Star complex of federal, state, and private land. Total wetland restoration costs are estimated at \$225,000. Upland restorations have also begun and will cost approximately \$250,000 if wild flowers are included. **11/97**

Longstanding Easement Case Heating Up Again in Mahnommen County, Minnesota

Detroit Lakes Wetland Management District

Even though it has been five years since the 127 wetlands were restored on the easement, the case has once again been put on the front burner. The easement holder claimed that the Service over-restored the wetlands and caused excessive water to be impounded in the wetlands. In 1994, he filed a claim against the Service for trespass, nuisance, breach of contract, inverse condemnation, and violation of the order for restoration. In March 1995, after a motion by the U.S. Attorney to dismiss the action, the easement holder agreed to dismiss all of the charges, and instead, filed a tort claim for \$200,000 against the Service for trespass and creating a nuisance. The claim was denied by the Service because the easement holder had not filed the claim in a timely manner and it was determined that the Service had restored the wetlands appropriately. The case was appealed to the 6th District Court. This court ruled in favor of the Service. In March 1997, the case was appealed to the 8th Circuit Court. This court overruled the District Court and has instructed the lower court to determine if the water that was impounded in the wetlands has caused a nuisance or has trespassed on the property. The case is now in the discovery stage and is expected to come to trial in the near future. **11/97**

People with Disabilities Hunt Deer on Rydell National Wildlife Refuge

Detroit Lakes Wetland Management District

Nineteen people with disabilities participated in a special deer hunt on the Rydell National Wildlife Refuge during the weekend of October 17-19, 1997. The hunt was sponsored through a partnership with Options Resource Center for Independent Living, Minnesota Department of Natural Resources, Detroit Lakes Wetland Management District and several volunteers. Favorable weather and an opportunity to see

deer and other wildlife provided an enjoyable weekend for all participants in the hunt. A total of seven deer were harvested. **11/97**

Partners Receive \$912,000 Grant to Restore Wetlands, Enhance Upland Acres

St. Croix Wetland Management District

Service partners pledged to contribute \$1.8 million in matching funds plus \$998,000 in non-matching (federal) funds and will receive a \$912,600 North American Wetland

Conservation Act grant. All money will be dedicated to purchasing, restoring, and enhancing wetlands and associated uplands in the pothole area of northwestern Wisconsin, a critical breeding area for waterfowl and other migratory birds. **11/97**

Tamarac National Wildlife Refuge Fall Open House and Craft Show

Tamarac National Wildlife Refuge

Unusually warm temperatures and lingering leaf color no doubt contributed to Tamarac National Wildlife Refuge's super-successful fall open house and craft show, held to kick-off National Wildlife Refuge Week. Nearly 700 visitors attended the event on Saturday, October 4, 1997, which featured talks, demonstrations, handmade craft items, food, and free Refuge week posters and bookmarks. **10/97**

Record Harvest Nets Close to 30,000 Pounds of Native Prairie Grass

Detroit Lakes Wetland Management District

A total of 27,700 pounds of native prairie grasses and forb seeds was harvested on six Waterfowl Production Areas (WPA) in the Detroit Lakes Wetland Management District during September 1997. The seed was harvested on WPAs that had harvestable stands of prairie grasses and forbs on them. The seed was dried and cleaned in the cleaning facility located at the Headquarters complex of the Detroit Lakes Wetland Management District. The retail cost of native prairie seed ranges from \$12 to \$36 per pound depending upon the diversity of grass and forb species that are present. The seed has a good mixture of grass and forb species so the retail value of the processed seed is estimated to be \$583,100. This seed will be used to restore 1,400 acres of cropland on the Detroit Lakes Wetland Management District, Hamden Slough National Wildlife Refuge, and White Earth Tribal Lands into nesting habitat for migratory waterfowl and other ground-nesting birds. **10/97**

Adopt-A-Highway Cleanup by Staff at Litchfield Wetland Management District

Litchfield Wetland Management District

On October 16, 1997, the staff of the Litchfield Wetland Management District once again donned their orange vests and set out to cleanup a two-mile portion of Highway 12 in Meeker County. This was the second cleanup this year. The office has participated in this program since 1995. The State of Minnesota has erected a sign in this two-mile area acknowledging this office's participation. **10/97**

Common Tern Nesting Successful at Mille Lacs Refuge

Rice Lake National Wildlife Refuge

A project to improve nesting success of common terns at Mille Lacs National Wildlife Refuge resulted in 52 terns fledged from the tern nesting colony on Hennepin Island. A string grid is constructed over one end of Hennepin Island to exclude ring-billed gulls from the tern nesting area. Ring-billed gulls compete with common terns for nesting sites and gulls are also predators of tern chicks. Refuge staff construct the nesting grid and Refuge and Mille Lacs Band biologists monitor nesting activity throughout the summer. **10/97**

Ojibwe Harvest Wild Rice at Rice Lake Refuge

Rice Lake National Wildlife Refuge

Ojibwe Indians harvested 23,000 pounds of wild rice from Rice Lake using traditional harvest methods. The Refuge provides access to Rice Lake and a local Indian ricing committee oversees the rice harvest. **10/97**

Rice Lake Refuge Designated 'Globally Important Bird Area'

Rice Lake National Wildlife Refuge

Rice Lake within Rice Lake National Wildlife Refuge was designated a Globally Important Bird Area under the American Bird Conservancy's Important Bird Area program. The lake supports concentrations of up to 100,000 waterfowl including as many as 70,000 ring-necked ducks during the fall migration. **10/97**

Rice Lake Refuge Participates in Greenshores Project

Rice Lake National Wildlife Refuge

Rice Lake Refuge is working cooperatively with the Aitkin County Soil and Water Conservation District through the Partners for Wildlife program to restore wildlife habitat and reduce erosion and pollution in riparian and shoreland areas. Cattle producers are provided with fencing to exclude cattle from shoreland and from a buffer strip of upland habitat adjacent to the lakeshore. Cattle producers are also provided cow-powered pasture pumps which provide a water source away from the shoreland so cattle won't wade into lakes and streams to drink. Landowners install the fencing and pasture pumps and agree to monitor the fence and pump for 10 years. In September, miles of shoreline and five acres of upland habitat were fenced and two pasture pumps were installed on two farms in Aitkin County. **10/97**

Ojibwe Drum Ceremony Held at Rice Lake National Wildlife Refuge Sacred Sites

Rice Lake National Wildlife Refuge

Over 100 people attended an Ojibwe drum ceremony at Rice Lake National Wildlife Refuge. The drum ceremony was conducted at a sacred site in the Refuge pursuant to Executive Order 13007. **10/97**

Morris Area High School Mentorship Program

Morris Wetland Management District

Kenton Moos and Wayne Henderson participated in the Morris Area High School Mentorship Program on March 26, 1998. They had two students at the District office for seven hours. Kenton and Wayne explained their jobs, required education, did mock job interviews, explained the mission of the Service, and performed field work. **3/98**

Benson Area High School Career Days

Morris Wetland Management District

Benson Area High School held a Career Day on March 31, 1998. Kenton Moos, biological technician, talked to 23 students interested in biology. There were two, 45-minute sessions. Moos explained his job with the Service, employment education requirements, Service career opportunities and answered students' questions. **3/98**

Geographic Information System Open House Attracts Many

Upper Mississippi River National Wildlife and Fish Refuge

A Geographic Information System (GIS) Open House was held at the Upper Mississippi River National Wildlife and Fish Refuge, LaCrosse District, April 20, 1998. Approximately 30 people attended the two-hour presentation given by Wildlife Biologist Lara Hill. The intention of the open house was to give other resource managers a chance to learn how GIS can contribute to management decisions for the LaCrosse District. **4/98**

District Members Participate in Community Mentorship Program

Morris Wetland Management District

On Tuesday, April 28, 1998, Chad Raitz participated with a Senior Mentorship program. In March, the students spent a day mentoring, and later gave an oral presentation about their experiences. Chad Raitz evaluated the students and answered questions. There were approximately 15 students presenting, and 90 students to listen and ask questions. **4/98**

Service Partnerships, Wildlife Practices Explained at Meeker County Mudhens Event

Litchfield Wetland Management District

The Meeker County Mudhens hosted their third annual Greenwing outing on April 25, 1998. Approximately 83 youths and 50 adults attended. The outing includes a mix of hands-on projects such as duck calling seminars, bluebird house construction, target shooting and presentations by Ducks Unlimited (DU), state and local officials, and Service Manager Tom Bell. District Manager Bell addressed the group. Topics covered included the benefits of partnerships between DU and the Service, the benefits of prescribed fire to prairie and ducks, and what Greenwings and adult members of DU can do to help waterfowl and other wildlife. **4/98**

Habitat: 13,000 Acres Burned Under Prescription

Agassiz National Wildlife Refuge

Prescribed burns were completed in April on the following areas at Agassiz National Wildlife Refuge: Northwest Pool 2,315 acres; Madsen Pool 2,025 acres; Webster Creek 1,220 acres; Headquarters Pool 2,300 acres; Pool 8 Triangle 25 acres. The Service also partnered with the Minnesota Department of Natural Resources in burning Service land at South Pool, 2,500 acres and the DNR's Lost Pool, 2,500 acres. **4/98**

India Wildlife Preserve Managers Visit Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge

Johann S. Chauhan, Deputy Director, Kauha Tiger Preserve, Mandla, India, and Kirti Shah Netam, Superintendent, Pachmari Wildlife Sanctuary, Madhya-Pradesh, India, spent five full days on Agassiz National Wildlife Refuge. This visit was arranged by the University of Idaho. The visitors spent two days with moose research student tracking animals, performing necropsies, and experiencing an air boat tour of Agassiz Pool. They spent a half-day with Refuge Manager Anderson discussing management plans while touring the Refuge and some time with the bittern project. Prescribed burning, hydro axing, water management, wilderness areas and the shop were visited. The National Wildlife Refuge System was discussed in detail. They spent a day with the wolf research team tracking/trapping wolves. The rest of the time was divided between the research crews. While here they resided at the bunkhouse. They will be traveling to Yellowstone, Bison Range, Craighead Institute and Siberia next. **4/98**

KSAX Television Interview on Nesting Structures

Morris Wetland Management District

On April 20, 1998, Jeff Hanson from KSAX Television, Alexandria, Minnesota, interviewed the District staffer Larry Lewis about artificial waterfowl nesting structures and general spring migration questions. The interview was part of a news story broadcast on the evening newscast April 21. **4/98**

Wetland Reserve Partners Target 2,400 Acres of Wetlands For Restoration

Wisconsin Private Lands

During the first nine months of a Wetlands Reserve Program partnership between the Service, Natural Resources Conservation Service and Wisconsin Waterfowl Association, 2,400 acres of restorable wetlands and associated uplands are in advanced stages of acceptance into the Wetland Reserve Program. These wetlands will be restored using funds from the U.S. Department of Agriculture's Wetland Reserve Program, and from the Service's Partners for Fish and Wildlife program. Three biologists have been hired by the partnership and are working out of the Service's offices in Madison, New Richmond, and Mayville, Wisconsin. **4/98**

Outreach: Monthly Coffee Time Program-Volunteers

Agassiz National Wildlife Refuge

Staff from the Agassiz National Wildlife Refuge try to appear at least once a month on "Coffee Time," a local radio and television program. Volunteers were the focus of this month's programs. Elise Goldstein, from Maryland, was completing three months of volunteering on the moose research project. Stephanie Nafthal, New York, just arrived to begin her three months of wolf research. Each volunteer talked about their respective projects and why they volunteer. Upcoming events, the Envirothon and International Migratory Bird Day Open House, were also discussed during the 30-minute program. **4/98**

Necedah National Wildlife Refuge Part of High School Career Day

Necedah National Wildlife Refuge

Refuge staffers manned a contact booth at the Tomah High School for Native American Awareness Week's Career Day in Tomah, Wis. Information about Necedah National Wildlife Refuge, volunteer and career brochures, endangered species fact sheets, and other handouts were distributed to more than 400 students. **4/98**

Administrative Mini-Workshop Held for Employees

Agassiz National Wildlife Refuge

Administrative Officer Wikstrom gave a three-hour administration mini-workshop to 10 Refuge employees. Purchasing, time and attendance, and personnel issues were the main focus. While much of the subject matter included a much-needed review, a great deal dealt with recent changes in purchasing, time and attendance, computerization, and streamlining of administrative duties and implications for employees. Future changes and expectations were also discussed. **4/98**

Landowners, Residents Receive Moose Updates by Mail

Agassiz National Wildlife Refuge

Approximately 1,300 landowners and residents in Thief River Falls, Viking and Newfolden, Minnesota, received a bulk mailing update on the moose research project and anticipated future activities. The January, 1998, mailing thanked residents and landowners for their continuing cooperation and support of the moose captures, telemetry work and notifying cooperators of sick or dead moose. This update was sent jointly from Agassiz National Wildlife Refuge and the Minnesota Department of Natural Resources. This is the second such bulk mailing on the project. Congressional staffers were also sent copies. **1/98**

Necedah National Wildlife Refuge Hosts Federal Junior Duck Stamp Contest

Necedah National Wildlife Refuge

The Wisconsin Federal Junior Duck Stamp contest was held March 25, 1998, with 806 entries submitted from young artists in grades K-12 from 90 schools. The "Best of Show" for Wisconsin went to Nina Goralski, an 11-year old student from Oconomowoc. Wisconsin Waterfowl Association again co-sponsored the event by arranging for the five judges and providing publicity and contest prizes. After being on display at the Necedah Refuge until April 25, 1998, the display of winning artwork travelled to various nature centers, Refuges and other places around the state. **3/98**

Twin Cities Tree Trust Joins Refuge Staff to Construct Boardwalk

Minnesota Valley National Wildlife Refuge

A 130-foot boardwalk and overlook structure was constructed at the UpGrala unit of the Minnesota Valley National Wildlife Refuge. In the short-term, the structure will serve as a boat dock for participants in the Disabled Hunting Program. In the long-term, it will serve as a boat dock, boardwalk, and overlook for the general public. **4/98**

Minnesota Valley Refuge Conducts Junior Duck Stamp Competition

Minnesota Valley National Wildlife Refuge

Minnesota Valley National Wildlife Refuge served as the depository for Minnesota Junior Duck Stamp Competition. More than 1,000 entries from students in grades K-12 were received. The judging took place at the Nicollet Conservation Club on Swan Lake in Nicollet, Minn. The judging was held in Nicollet due to the tremendous support from Mankato and surrounding communities. Teachers, parents and representatives from the art community, as well as the wildlife agencies wanted a more active role in the competition. Five judges selected the 100 winning entries. The judges were Marvin Moriarty from the Service; Jeff Hedtke from the Board of Water and Soil Resources; Jeff Holmin, artist and Director of the Nicollet Conservation Club; and artists Marian Anderson from Mankato, and John House from Evansville, Minnesota. Rebecca Latham, an 18-year old home school student captured the Best-of-Show with her acrylic painting of Redheads. Rebecca's painting will be sent to Washington D.C., where it will compete at the national competition. **4/98**

Rotenone Treatment Reduces Carp; Improves Heron Lake

Windom Wetland Management District

A successful step toward improving water quality and encouraging the growth of submergent aquatic vegetation was recently accomplished by reducing the carp population in Heron Lake, a historically significant waterfowl migration area. Approximately 300,000 pounds of carp were removed by a commercial fisherman by early February. A mid-February rotenone application was successful in killing nearly all of the remaining carp. Massive numbers of dead carp, up to 20 pounds in size, are now appearing along the Heron Lake shoreline. Northern pike will be stocked to help suppress carp reproduction. **4/98**

New Young Waterfowlers Program a Smashing Success

Minnesota Valley National Wildlife Refuge

Staff from Minnesota Valley National Wildlife Refuge, Minnesota Waterfowl Association, Minnesota Duck and Goose Callers Association, and Burger Brothers hosted a wild game dinner on January 24. More than forty people enjoyed delicious wild game dishes and a recognition program. The newly-designed program included the new audio-visual training system, new lesson plans and format, and the wild game feed. **1/98**

Horicon Refuge Assists Wisconsin Department of Natural Resources Public Meeting

Horicon National Wildlife Refuge

Refuge Biologist Diane Penttila gave a presentation at a public meeting held February 3, 1998, on water level management experiences from Horicon National Wildlife Refuge. The Main Pool on the state end of Horicon Marsh has been held at relatively consistent levels for about 20 years. Wisconsin Department of Natural Resources managers would like to manage their water levels in a marsh cycle (such as Horicon National Wildlife Refuge) with the first step being a draw down for their Main Pool. Almost 80 people attended the meeting to address reasons for changes in water level management, expected vegetation and wildlife responses, and long range plans for management. Public response was positive and supportive. **2/98**

Savage Fen Management Plan Finalized

Minnesota Valley National Wildlife Refuge

Minnesota Valley National Wildlife Refuge staff participated in several planning meetings and public open houses as part of the effort to develop a Savage Fen Management Plan. This plan will be used as a guide to assist decision makers in the review and comments on development projects that have the potential to affect the fen wetland complex. Currently more than 200 acres of the complex are currently within the Refuge boundaries. **2/98**

County Commissioners Approve Two Waterfowl Production Area Tracts

Minnesota Valley National Wildlife Refuge

Two Waterfowl Production Areas (WPAs) totaling 155 acres were purchased with federal Duck Stamp funds. The WPAs were approved for purchase by the Blue Earth and Rice County commissioners. These areas are located adjacent to state wildlife management areas and will provide excellent habitat. Wetlands and grasslands will be restored on the WPAs. The next step in the process is to obtain approval from the state land exchange board. **2/98**

Bird Boxes in Place for Agassiz Contaminant Study

Agassiz National Wildlife Refuge

Dave Warburton, Twin Cities Field Office, and Chris and Tom Custer, U.S. Geological Survey-Biological Resource Division, placed 180 swallow nest boxes in five locations on Agassiz Refuge. Boxes were placed in three areas where water flows into the Refuge (Mud River, Thief River), an interior area (west side of Agassiz Pool), and one out flow area (Parker Pool). Preliminary investigations have revealed evidence of mercury and cadmium in some water bird species. The study is designed to evaluate uptake and effects of metals on Refuge wildlife. **3/98**

Partnership Receives Technology Grant

Fergus Falls Wetland Management District

A partnership between Fergus Falls School District 544 and the Prairie Wetlands Learning Center has resulted in a \$75,000 technology grant to link the school district and community. The grant provided by the Minnesota Department of Children, Families, and Learning will allow the Center to act as an auxiliary learning site with direct computer links to classrooms. The grant will provide for the purchase of computers, field data entry modules, as well as other equipment. This project sets the stage for linking the Prairie Wetlands Learning Center to other schools in Minnesota as well as nationally. **4/98**

Service Meets Over Red River Wetland Restoration Guidelines

Fergus Falls Wetland Management District

Two meetings have been held to resolve differences between the Minnesota Wetland Restoration Guidelines and the draft Guidelines for watersheds within the Red River Basin. Differences in two versions revolve around additional expense and negative impacts to nesting waterfowl in the draft Red River Basin Guidelines. **1/98**

Community Leaders Tour New Prairie Wetlands Learning Center

Fergus Falls Wetland Management District

On March 1, 1998, Fergus Falls District hosted an open house and tour of the Prairie Wetlands Learning Center for local community leaders and members of the Friends of the Prairie Wetlands Learning Center. Attendees toured the facility under construction (about 75 percent complete) and discussed the building and programs answered. **3/98**

Foundation Honors Prairie Wetlands Learning Center

Fergus Falls Wetland Management District

The National Fish and Wildlife Foundation and the Service's National Education and Training Center announced the selection of the Prairie Wetlands Learning Center as an Earth Steward Site. The Center was one of 10 selected, of which there are only 15 nationally. This selection carries with it a \$5,000 cost share grant for development of environmental education at the site. **4/98**

***Two hundred fifty visitors
learned about birds, other
wildlife and the Muscatatuck
National Wildlife Refuge at the
Refuge celebration of
International
Migratory Bird Day
- Muscatatuck NWR
Outreach Accomplishment***

Environmental Education: Students See Wolf Collared

Agassiz National Wildlife Refuge

Wolves in three packs will be radio collared as part of a three-year study on wolves at Agassiz National Wildlife Refuge. This is the only study of wolves occurring in primarily an agricultural area. Prairie Wind Middle School/Perham High School have secured grants to purchase two satellite collars (\$8000) for the study and to give students "real-time" experience with research. The school has also secured grants to initiate a Research Science Curriculum. Several pilot schools have been selected for 1997-98 to incorporate Geographic Information System capabilities. Through GIS and the Internet, students track their collared wolf, design a Web page, gather facts on wolf biology, management, controversy, and in the field to experience first-hand wildlife management and research techniques. Grants are being written to expand this capability to other wildlife and natural resource concerns; for example biological control agents for control of noxious weeds. At the Refuge, students see how animals are captured, collars placed, and data collected. Only one wolf, an alpha male, was captured and a radio collar was placed on it and data collected. **3/98**

Migratory Bird Conservation Commission Approves Grants to Region 3 Partners

Joint Venture Office

On March 4, 1998, the Migratory Bird Conservation Commission approved four Region 3 North American Wetlands Conservation Act grants for a total of \$2,487,056. The Red Lake Farm-Kiwosay Habitat Restoration Project, Phase II, will restore 425 acres of wetlands and 800 acres of uplands on the Red Lake Reservation in Minnesota. The Prairie Wetland Heritage Conservation Initiative will acquire, restore or enhance 3,115 acres of prairies and prairie wetlands in 36 southwestern Minnesota counties. The Meredosia Wetland Complex Project will acquire and restore 1,160 acres of Illinois River flood plain adjacent to the Meredosia National Wildlife Refuge. The Southern Lake Michigan Coastal Wetlands Project, Phase II, will restore 800 acres of sensitive wetland communities near the Indiana Dunes National Lakeshore. Primary partners are listed above, respectively. **3/98**

1998 Joint Venture Award Winners Announced

Joint Venture Office

The winners of the 1998 Upper Mississippi River and Great Lakes Region Joint Venture awards were announced March 20, 1998. The awards recognize the important contributions of partners to the objectives of the North American Waterfowl Management Plan. The Stewardship Award was presented to Richard Becker, a farmer and landowner in Two Rivers, Wisconsin. The Organization Award was given to Partners for Wetlands, a conservation coalition based in Alton, Illinois. The Nongame Award went to Madison Audubon Society of Madison, Wis. The Professional Award went to Dr. Robert Gates of Southern Illinois University. The Partnership Award was presented to Robert Jackson of the Bureau of Indian Affairs. **3/98**

One Wolf Captured and Collared at Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge

The Elm Lake and Golden Valley wolf packs were to be located with the aid of individual animals previously collared. Unfortunately, radio-collared animals in the Elm Lake pack had been removed, making location difficult. Conditions were unfavorable for spotting animals due to little or no snow. By using an airplane, and by driving roads, four wolves were located. Unfortunately, the helicopter could not be deployed in time for capture. Four wolves were spotted in the Elm Lake pack and one wolf was captured from the Golden Valley pack. The satellite-collared wolf on the north end of the Refuge was located once. **3/98**

Media On-Hand For Moose Captures and Annual Deer Survey

Agassiz National Wildlife Refuge

Grand Forks Herald and Grygla Eagle newspapers were on-site for helicopter moose capture photos on Agassiz National Wildlife Refuge and private lands. Gary Tischer, Refuge operations specialist, and Eric Cox, Ph.D. student, were interviewed. KTRF radio interviewed Gary Huschle on the 1998 Deer Survey. Deer numbers were lowest on record at 432. **3/98**

Land Acquisition- Big Stone Wetland Management District

Big Stone Wetland Management District

Commissioners in Lincoln County, Minnesota, certified two grassland easements while Lyon County, Minn., commissioners certified one 102-acre fee title tract. They indicated they were pleased to deal with the Service. **2/98**

Impromptu Eagle Watch Results in Numerous Visitors

Minnesota Valley National Wildlife Refuge

Minnesota Valley National Wildlife Refuge promoted and staffed an impromptu "Weekend Eagle Watch Event" for the purpose of inviting the public out to view the eagles using the Upgrala unit of the Refuge. Approximately 1,500 individuals came out to view the 60-100 eagles for this two-day event. The public was most appreciative of our efforts and interested folks from as far away as Hutchinson, Minn., came to participate in this splendid display of wild critters within an urban setting. **3/98**

Refuge Staff Presents Facts on Refuge Watershed Management

Agassiz National Wildlife Refuge

Agassiz National Wildlife Refuge co-hosted a meeting for members of the Red Lake Watershed District, several Minnesota county commissioners, and representatives from local communities to present the facts concerning water management on a wildlife Refuge and within a watershed. Refuge staff explained why wildlife Refuges are not willing to do total fall drawdowns on impoundments to provide more flood storage, and discussed the health concerns related to hydrogen sulfide. The meeting was attended by county commissioners from Marshall and Pennington Counties, six members of the Red Lake Water Shed District, representatives from the town of Thief River Falls, Minn., and eight Minnesota DNR staff from the Divisions of Wildlife, Eco-services and Fisheries. **2/98**

Minnesota Valley National Wildlife Refuge Hosts River Celebration

Minnesota Valley National Wildlife Refuge

On February 19, 1998, the Minnesota Board of Soil and Water Resources and the United States Department of Agriculture officially announced a joint effort to restore and protect up to 190,000 acres of the Minnesota River lands as part of the Conservation Reserve Enhancement Program (CREP). The announcement and

celebration was held at Minnesota Valley National Wildlife Refuge Visitor Center and those in attendance included Governor Arnie Carlson, Senator Paul Wellstone, and Representatives David Minge and Bruce Vento. **2/98**

Ohio River Ecosystem

Make a Difference Day Honors Refuge Volunteers

Muscatatuck National Wildlife Refuge

Sixty volunteers organized by Green Thumb and Muscatatuck National Wildlife Refuge worked at the Refuge October 27, 1997, in support of national "Make a Difference Day." Volunteers from Seymour High School, Kiwanis, Refuge and Green Thumb staff, and Atterbury Job Corps students helped with office landscaping and converted a quarter-mile of the Chestnut Ridge Trail to physically-challenged accessible. Approximately 300 volunteer hours were contributed, resulting in the planting of 50 plants, and renovations on 1,300 feet of trail. **10/97**

Sioux Pond Restoration Completed at Muscatatuck Refuge

Muscatatuck National Wildlife Refuge

Students from the Atterbury Job Corps heavy equipment program and Refuge staff seeded the Sioux Pond project October 9, 1997. Rains will later fill this excellent marsh area at the west entrance to the Refuge. Recognition of the project was given at the Job Corps Community Awareness luncheon October 30. Atterbury Job Corps brought dozers, scrapers, pans and rollers to train students with a real project. Thirty students participated and 1,500 total "on-the-job" training hours were completed. **10/97**

200 People Run, Walk, Cheer For Refuge's Conservation Learning Center

Muscatatuck National Wildlife Refuge

A fund-raising five-kilometer run/walk held at Muscatatuck National Wildlife Refuge helped raise more than \$6,000 for the Refuge's Conservation Learning Center project. The fund-raising event was sponsored by the Muscatatuck Wildlife Society. Eighty-one runners and another 100 fans participated in the National Wildlife Refuge Week event. National Wildlife Refuge Week activities attracted 1,150 visitors to the Refuge. **10/97**

Muscatatuck Volunteers from Earlham College Repair Ponds

Muscatatuck National Wildlife Refuge

Refuge volunteers from Earlham College spent 20 hours repairing a wooden dam on a Refuge frog pond. A new trickle tub was also installed at no cost to the Refuge. The pond should produce a lot more amphibians in the future according to Dr. Iverson of Earlham. **10/97**

Wood Duck Boxes Constructed as Part of Eagle Scout Project

Patoka River National Wildlife Refuge

Boy Scout Dan Stone directed the construction of 12 wood duck boxes by Scout Troop 242 with the advice and assistance of Waterfowl USA members and Refuge staff. The Scouts erected the boxes in suitable locations for wood duck nesting. Dan Stone earned his Eagle Scout rank for this project. **2/98**

Refuge Hosts Indiana Junior Duck Stamp Contest

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge hosted the Indiana Junior Duck Stamp Contest. Nearly 400 Indiana students participated in this year's contest. Refuge volunteers managed the program. Co-sponsors include the Indiana Department of Natural Resources, and Indiana Chapter of Ducks Unlimited. Judging was held at the Refuge on March 21, 1998. Students working on their entries at a local school were featured on Louisville, Ky., television (Channel 32) news broadcast. **3/98**

Ordnance Bunkers Converted to Bird Houses at Jefferson Proving Ground

Muscatatuck National Wildlife Refuge

Refuge staff are turning former ordnance observation platforms at Jefferson Proving Ground into bird houses. Abandoned observation bunkers were fitted with predator-proof doors, nest platforms and roosts. These measures might entice barn owls, black vultures, and turkey vultures to use these structures on Jefferson Proving Ground. Eastern phoebes and barn swallows already use these observation bunkers for their nests. **4/98**

Muscatatuck Staff Prescribe Burns 4,000 Acres on Jefferson Proving Ground

Muscatatuck National Wildlife Refuge

The Service successfully implemented a 4,000 acre prescribed fire to maintain grassland habitat on Jefferson Proving Ground in southern Indiana. Service crews, in cooperation with the U.S. Army Corps of Engineers, set backing fires and monitored the burns over a three day period. The Service is analyzing the effectiveness of the burn by comparing photo points before and after the burn and by estimating survivorship of tagged trees. The fire set-backs woody vegetation and encourages grasslands that a variety of fauna need to survive. **4/98**

Students Receive Tree Seedlings During Earth Day Program

Muscatatuck National Wildlife Refuge

Refuge staff coordinated an Earth Day program at English Middle School for 250 sixth graders, and an Arbor Day program held at Vienna Finley Elementary School for 300 students - all students received tree seedlings to plant at home. **4/98**

Muscatatuck Uses Traveling Exhibits for Education

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge used two Service traveling exhibits at the Falls of the Ohio Interpretive Center in Indiana. Both exhibits were displayed for one month. Approximately 5,200 people saw the Endangered Species display and 4,705 people saw the North American Waterfowl display. **4/98**

Prescribe Burns Enhance Habitat on Service Sites in Indiana

Muscatatuck National Wildlife Refuge

Muscatatuck Refuge staff prescribe burned 4,000 acres at Jefferson Proving Ground to enhance habitat for grassland birds, most notably the Henslow's sparrow. One hundred acres of grassland were also burned at Muscatatuck Refuge to enhance grassland habitat. **4/98**

Muscatatuck National Wildlife Refuge Participates in 'Kidsfest' Event

Muscatatuck National Wildlife Refuge

Refuge volunteers staffed a table at a 'Kidsfest' community event and contacted approximately 100 people with information about the Refuge and Service educational programs. **4/98**

Muscatatuck Celebrates International Migratory Bird Day

Muscatatuck National Wildlife Refuge

Two hundred fifty visitors learned about birds, other wildlife and the Muscatatuck National Wildlife Refuge at the Refuge celebration of International Migratory Bird Day on May 2. Another 140 people attended a free breakfast that morning provided by the Muscatatuck Wildlife Society Foundation with donations going to the Conservation Learning Center project. **5/98**

Service Consult Examines Forest Service Project's Affect on Indiana Bat

Marion Sub Office

The Shawnee National Forest proposes an environmental restoration and vegetation management project which involves the partial conversion of 3,400 acres of non-native pines to native hardwoods through shelter wood harvest methods and girdling of trees. Recent information indicates the endangered Indiana bat utilizes dead pine snags for roosting. This prompted the Forest Service to consult with the Service to determine the effects of the pine harvest on Indiana bats. After further evaluation, the Service concurred that the proposed pine harvest is not likely to adversely affect the Indiana bat. Various individuals and environmental groups oppose this environmental project and disagree with our decision. Currently, both the U.S. Fish and Wildlife and Forest Services are the subject of litigation. **5/98**

Muscatatuck National Wildlife Refuge Volunteers Do 'May Day' Bird Count

Muscatatuck National Wildlife Refuge

Volunteers conducting the "May Day" statewide bird count on Muscatatuck National Wildlife Refuge on May 9, 1998, found 118 species. **5/98**

Water Quality Testing Continues at Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge continued its partnership with Seymour High School and the river watch program when four bus loads of high school students did their biannual water quality testing on Storm and Mutton creeks May 15, 1998. **5/98**

Students View Patoka Refuge Demonstration at Gibson County Farm Days

Patoka River National Wildlife Refuge

Refuge Biologist Bob Dodd set up and demonstrated the damaging impacts of stream flooding on adjacent lands left unprotected by clearing and snagging stream cover and explained negative impacts to fish and wildlife. A stream table with running water provided an active demonstration. **5/98**

Refuge Hosts Conservation Field Days, Indiana Junior Duck Stamp Awards in May

Muscatatuck National Wildlife Refuge

Four hundred third-graders attended two Conservation Field Days at the Refuge May 19-20, 1998. Refuge staff joined instructors from several conservation agencies to teach students about wildlife, wetlands, soil conservation and forest conservation. The Muscatatuck Wildlife Society sponsored an awards ceremony for winners of the Indiana Junior Duck Stamp contest at the Refuge May 23, 1998. **5/98**

Challenge Grant Creates Scottsburg High School Outdoor Lab

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge, using challenge grant cost share funds, participated in a wetland restoration and outdoor lab project at Scottsburg High School, Scottsburg, Indiana. The project will enrich the lives of more than 900 students. The lab presently consists of a wetland, butterfly garden, tree planting, and amphitheater classroom. The dynamic classroom will be enhanced annually by students and teachers as part of their studies. **6/98**

Service Plants Trees, Builds Environmental Trail at Noah's Ark

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge, using challenge grant cost share money, created a wetland enhancement and outdoor lab project with Noah's Ark in southern Indiana. The project helps protect and enhance one of the largest privately owned wetland areas left in Jeffersonville, Indiana. An environmental education trail was built and the 50 trees of Indiana were planted to enhance the area. Noah's Ark is a non-profit, 90-acre working farm for disadvantaged youth. Approximately 13 acres of the farm are wetland. **6/98**

Jennings County Private Land Restoration Completed

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge completed a one-acre Partners for Fish and Wildlife wetland restoration in Jennings County, Indiana, with help from Indiana Department of Natural Resources. **6/98**

Refuge Staff Collects Data on Secretive Marsh Birds

Muscatatuck National Wildlife Refuge

The project provides data relating to water level, habitat use, status and relative abundance of secretive marsh birds (least bittern, American bittern and rail species) on the Refuge. A comparison will be made between managed and unmanaged water areas to determine habitat and water level relationships to the abundance of these secretive marsh birds. Future management considerations will be influenced by the findings of this project. **7/98**

Refuge Conducts Land Bird Point Counts, Non-game Bird Breeding Survey

Muscatatuck National Wildlife Refuge

The project provides detailed information relating to the status, relative abundance and species habitat relationships of nongame breeding birds on the Refuge. Species of concern in Region 3 of highest priority include the cerulean warbler, prairie warbler, blue winged warbler, etc. Data from this project will be analyzed and evaluated to help present any future decisions in regards to habitat management. Protocol will be as established during the pilot year of this project and in accordance with Service Nongame Bird Survey and Monitoring Methods. In 1997, 1,118 volunteer hours were spent on this project. **7/98**

Dragonfly New to Indiana Found at Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge

A Muscatatuck National Wildlife Refuge volunteer working on the dragonfly study at the Persimmon Pond area observed a new species to the State of Indiana, *Epithea canis*, or beaver pond basket tail. This is a northern species and what it is doing as far south as Muscatatuck is anybody's guess. The identification has been confirmed by the head of the Ohio Odonata study. Thirty-two species of dragonflies have been confirmed on the Refuge to date. **7/98**

1,000 Henslow's Sparrow Singing Males Surveyed at Jefferson Proving Ground

Muscatatuck National Wildlife Refuge

Service staff surveyed Henslow's sparrows through the use of roadside counts throughout available habitat at Jefferson Proving Ground. Initial results indicated that there were approximately 1,000 singing males (pairs) at Jefferson Proving Ground. The breeding population of Henslow's sparrows has been stable during the four-years in which the Service has conducted surveys at Jefferson Proving Ground. **7/98**

Muscatatuck Named 'Continentially Important Bird Area'

Muscatatuck National Wildlife Refuge

The American Bird Conservancy notified Muscatatuck National Wildlife Refuge staff recently that Muscatatuck qualified as a "Continentially Important Bird Area." The designation should lead to more research and knowledge being gained about bird populations. **7/98**

Telemetry Work Continues on Refuge's Copperbelly Watersnakes

Muscatatuck National Wildlife Refuge

Copperbelly watersnakes are on the move at Muscatatuck National Wildlife Refuge, and telemetry work continues with the tracking of six snakes that came out of hibernation and have now been tracked for one year. Four new, smaller snakes have been released after surgery to implant tracking transmitters and are being tracked. **7/98**

Refuge Contributes to Wetland Enhancements at Noah's Ark

Muscatatuck National Wildlife Refuge

The project cost-shares the enhancement of a wetland area and associated uplands, plus the creation of an outdoor education lab for use by disadvantaged youth and local communities. The project will protect and enhance one of the largest privately-owned wetland areas remaining in the local area. It will encourage innovative and exciting educational opportunities that will directly enrich the lives of many people in the regional community. Plans include tree, bush and wildflower plantings to attract birds and butterflies, construction and erection of bat- and bird-nesting houses and establishing a nature trail and outdoor study area. **8/98**

Private Land Wetland Restoration by Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge completed a three-acre Partners for Fish and Wildlife wetland restoration at the Engle Wetland in Jennings County, Indiana. The wetland was restored with help from Indiana Department of Natural Resources. **8/98**

Indiana Bat Population Studied at Jefferson Proving Ground

Muscatatuck National Wildlife Refuge

Refuge staff captured and radio-marked lactating female bats to assess maternity colonies during late June-August. Service staff surveyed 18 sites and caught 178 bats of seven different species including seven Indiana bats. An additional five maternity roost sites of Indiana bats were discovered through this project. **8/98**

Dikes Repaired at Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge

Refuge maintenance staff have been working on damage caused by flooding in 1996 and 1998. Repairs were completed in the waterfowl sanctuary area, restoring dikes on 700 feet of the M7 moist soil unit, as well as other work on the McDonald marshes. **8/98**

Muscatatuck National Wildlife Refuge Hosted Wood Duck Workshop

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge hosted a wood duck workshop in cooperation with Indiana Department of Natural Resources on August 26-27, 1998. The workshop focused on wood duck biology, trapping and banding to promote an increase in wood duck banding efforts. The event was attended by Indiana Department of Natural Resources property managers and biologists representing Indiana, Kentucky, and Ohio. **8/98**

Forest, Interior Grassland Bird Productivity Studied at Jefferson Proving Ground

Muscatatuck National Wildlife Refuge

Service staff at Jefferson Proving Ground monitored bird nests in mature forest and grasslands. Over 300 nests were monitored during 1998, including 17 Henslow's sparrow nests, the second largest sample of this species ever monitored. Data on nest productivity and vegetation characteristics was collected for each nest monitored. **8/98**

Accessible Fishing Structures Planned for Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge has two accessible fishing structures in Lake Linda and Stanfield Lake. Summer aquatic vegetation growth frequently prohibits fishing from the structures and they need to be extended further out in the lakes to deeper water. Two, 20-foot walkway extensions will be purchased and installed. **9/98**

Erosion Control Project at Jefferson Proving Ground

Muscatatuck National Wildlife Refuge

Refuge staff is testing hydro-seeding on eroded areas in an attempt to slow runoff and revegetate bare soil. This project will continue during the fall of 1998 and 1999. **9/98**

Private Land Funding Improves Fish Habitat

Patoka River National Wildlife Refuge

Special private land funding to enhance nongame fish habitat was provided to Patoka River Refuge. A landowner agreed to provide access on his land to construct six log and boulder deflectors and in-stream shelters on the South Fork in a location that had been dredged and straightened many years before. **9/98**

Muscatatuck Team Building Retreat Held at Jefferson Proving Ground

Muscatatuck National Wildlife Refuge

“Working Together for the Refuge, the Refuge System and Fish and Wildlife,” was the theme for a two-day, team-building retreat hosted by Muscatatuck National Wildlife Refuge. Twenty-six people representing eight organizations attended meetings held at Old Timbers Lodge at Jefferson Proving Ground. Presentations included information on Muscatatuck Refuge, Jefferson Proving Ground, Air National Guard activities on Jefferson Proving Ground, environmental regulations and success stories from Muscatatuck National Wildlife Refuge Wildlife Society. Activities included team building skills, conflict resolution, planning, reviewing positives and challenges for the future. **9/98**

Muscatatuck Refuge Hosts Conservation Field Day

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge hosted a Conservation Field Day program for 160 students and teachers. Attendees learned about wildlife, wetlands, soil conservation, and forestry. Participants learned from Refuge personnel about endangered species and national wildlife Refuges. **9/98**

Muscatatuck Provides Information for National Geographic Guide

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge staff provided birding information to National Geographic Society as part of the Refuge’s entry in the National Geographic Guide to Birdwatching Sites. **9/98**

Geographical Information System in Use at Jefferson Proving Ground

Muscatatuck National Wildlife Refuge

The Service’s office at Jefferson Proving Ground has compiled data from the Landsat satellite and aerial photography, and ground-verified interpretation from these data sources. The data is being compiled in part from contracts with local universities. Information pertaining to federally and state listed species, migratory birds, prescribed fire management, karst resources, and other natural resource management activities are being added to this Geographic Information System database. **9/98**

Surveys at Jefferson Proving Ground Reveal 14 Threatened/Endangered Species

Muscatatuck National Wildlife Refuge

A recent survey of Jefferson Proving Ground by the Indiana Department of Natural Resources’ Division of Nature Preserves has revealed the presence of 42 state-endangered, threatened-rare and watch-list plants. During its survey in the early 1990s, the Indiana Department of Natural Resources discovered 29 state-endangered, threatened-rare and watch-list plants. The recent survey added another 14 species to the list. **9/98**

Amphibian Surveys Conducted at Jefferson Proving Ground

Muscatatuck National Wildlife Refuge

Dr. Daryl Karns, Hanover College, is currently surveying amphibian populations on Jefferson Proving Ground with several of his students. Dr. Karns has surveyed reptiles and amphibians at Jefferson Proving Ground for several years. The present study looks at species diversity of amphibian communities in several types of wetland habitats found on Jefferson Proving Ground. **9/98**

Patoka River Helps Restore 246 Acres of Wildlife Habitat on Private Lands

Patoka River National Wildlife Refuge

Thirteen cooperators participated in the restoration of 124 acres of wetlands, 89 acres of trees, and 33 acres of grassland for a total of 246 acres of wildlife habitat. Co-op farmer Larry Foust agreed to plant bottomland hardwood tree seedlings on 30 acres of converted wetland in return for farming the adjacent land **9/98**

Nesting of Great Blue Heron Monitored at Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge

Nesting activities of great blue herons were monitored on Muscatatuck National Wildlife Refuge in April. Forty-seven nests were located. A report was submitted to Indiana Department of Natural Resources and the Colonial Bird Register, Cornell University. **6/98**

Poacher Pays \$1,250 Fine For Deer Taken on Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge

A Muscatatuck National Wildlife Refuge officer apprehended a subject who had killed a deer in an area closed to hunting on the Refuge last December. The subject paid the \$1,250 fine without going to court. **6/98**

Seven Species New to Science Found in Indiana's Binkley Cave System

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge and its Ohio River Valley Ecosystem Team (ORVE) recently received a preliminary report on the Binkley Cave/Karst study that indicates in the 20 mile cave system, 68 species have been found including 18 of significant global rarity and seven species new to science. This project also includes quarterly water sampling and is establishing information to be used by the Nature Conservancy's Blue River project and its partnership with the local communities. Binkley Cave is located about 30 miles west of Louisville, Ky., in southwest Indiana. Dr. Julian J. Lewis of Indiana University, Southeast, conducted the study. Other Partners include The Nature Conservancy and the Indiana Karst Conservancy. **9/98**

Patoka Refuge Acquires 1,129 Acres From Seven Indiana Property Owners

Patoka River National Wildlife Refuge

The Patoka River National Wildlife Refuge purchased 1,129 acres from seven property owners for \$925,000. Funding came from a North American Waterfowl Management Plan grant and the Land and Water Conservation Fund. **9/98**

Muscatatuck National Wildlife Refuge Outreach At Indiana Conferences

Muscatatuck National Wildlife Refuge

Refuge volunteers and staff manned booths and showed Service exhibits and materials at the Hoosier Association of Science Teachers and Indiana Ducks Unlimited conferences in February. Approximately 2,600 people were exposed to Service programs and Refuge system information. Refuge staff took the "North American Waterfowl Management Plan" exhibit to the spring conference of the Indiana Wildlife Society where it was viewed by approximately 200 people. **2/98**

Muscatatuck National Wildlife Refuge Hosts Fishing Program for School Group

Muscatatuck National Wildlife Refuge

Indiana Conservation Officers and Refuge volunteers gave 34 youngsters from Hayden School lessons in fishing techniques and ethics at Muscatatuck National Wildlife Refuge. **2/98**

Interagency Firefighting Training Held at Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge

Muscatatuck Refuge hosted firefighting training for approximately 25 members of various federal agencies, including the Service, U.S. Army Corps of Engineers and Department of Defense. Service staff served as instructors for the fire training, which is designed to create a team of firefighters trained to conduct prescribed burnings. **1/98**

Habitat Management Agreement Renewed

Muscatatuck National Wildlife Refuge

The Refuge and Muscatatuck Quail Unlimited have renewed for three more years a habitat management agreement for a 40-acre area that Quail Unlimited began in 1995. This partnership highlights quail and grassland nesting bird habitat with "in the field" practices. **4/98**

Muscatatuck Refuge Deer Hunt a Success

Muscatatuck National Wildlife Refuge

Muscatatuck National Wildlife Refuge, in cooperation with the Indiana Department of Natural Resources, held a primitive weapons deer hunt in December 97 and early January 98 to reduce the Refuge deer population. Approximately 1,500 hunters harvested 100 deer. Refuge deer management is moving into the "maintenance" phase. **1/98**

Volunteers Participate in Christmas Bird Count at Muscatatuck

Muscatatuck National Wildlife Refuge

Approximately 21 volunteers participated in the National Audubon Society's "Christmas Bird Count" on Muscatatuck National Wildlife Refuge on January 1, 1998. The group found 71 species of bird, and a monarch butterfly. **1/98**

Refuge's Flood Damaged Public Roads Repaired

Muscatatuck National Wildlife Refuge

Refuge staff and a bid contractor rehabilitated seven miles of public use roads damaged during the record flooding of 1996. Work included ditching, culvert replacement, grading and gravel replacement. The public has commented that this is the best the roads have been in a long time and they hope funding will continue so these improvements can be maintained and expanded. **1/98**

Ozark Watershed

No Reports Submitted

Arkansas - Red Rivers Ecosystems

Refuge Exhibit at Poplar Bluff Open House

Mingo National Wildlife Refuge

Mingo National Wildlife Refuge operated an information booth at an open house in Poplar Bluff, Missouri. The open house was designed to bring together businesses and government entities to encourage public questions and involvement. Refuge staff set up the Refuge display and handed out information to approximately 400 visitors. **3/98**

Stoddard County, Missouri Ecology Days

Mingo National Wildlife Refuge

Refuge staff, a volunteer, and representatives from several other agencies gave presentations to approximately 400 Stoddard County, Missouri, fifth-graders during the annual Ecology Days at Mingo National Wildlife Refuge. Students rotated through a series of stations during the three-day event. Topics included wetlands, Mingo wildlife, soils, fish resources, and fabulous flora. **4/98**

Missouri Students Taught Resource Topics During Butler County Ecology Days

Mingo National Wildlife Refuge

Refuge volunteers taught environmental education classes to nearly 600 Butler County, Missouri fourth-graders at the annual Butler County Ecology Days at Mingo National Wildlife Refuge. Students rotated through a series of stations to learn about wetlands, fabulous flora, fish, animal adaptations, and other resource topics. The event took place over a four-day

period at and around the Mingo National Wildlife Refuge visitor center. Refuge staff also spoke to approximately 650 seventh grade students at the annual Earth Days celebration at Lake Wappapello. Rod Hansen gave talks on the Fabulous Flora while Terry Peacock talked about wetlands. **5/98**

Kids Help Mingo Refuge Celebrate Fishing Week

Mingo National Wildlife Refuge

The Refuge hosted a youth fishing tournament for kids 16 and under on June 6, 1998.

Approximately 90 youths entered the event. Prizes were awarded for the six longest catfish. Local businesses donated more than \$500 in merchandise to be given away as tournament and prizes. A pond was stocked with 1,000 pounds of catfish prior to the event. **6/98**

Mingo Refuge, Job Corps Begin New Environmental Education Initiative

Mingo National Wildlife Refuge

Mingo National Wildlife Refuge is starting a new initiative that will provide Mingo Job Corps students with a 32-hour environmental education curriculum while incorporating its existing program that reaches approximately 2,000 elementary students annually. A new Environmental Education Specialist has been hired to staff the program. Refuge staff will teach basic classes to elementary students, but will utilize Job Corps students as aids and to help teach some interactive activities. **8/98**

Refuge Hosts Missouri Hunter Education Classes

Mingo National Wildlife Refuge

Staff and volunteers from Mingo National Wildlife Refuge and the Missouri Department of Conservation conducted a hunter education class for 25 young hunters and a few parents at the Refuge. Hunter education classes are mandatory in Missouri. The 10-hour program was taught during two evenings and a Saturday morning. **8/98**

Mingo's Wildlife Diversity Displayed at Southeast Missouri Regional Fair

Mingo National Wildlife Refuge

Mingo Refuge staff and volunteers maintained a large display at the Southeast Missouri Regional Fair in Cape Girardeau, Mo., Sept. 13-19, 1998. Staff and volunteers answered questions and provided information to approximately 5,000 visitors. Wildlife items on display included preserved animals found at the Refuge, migratory bird bands, volunteer items, deer antlers, and mounted migratory birds and raptors. The Refuge also provided an enormous amount of literature and brochures to the public concerning Service activities and programs. **9/98**

Mingo Refuge Assists With Outdoor Sportsmanship Clinic

Mingo National Wildlife Refuge

Charlie Shaiffer and several volunteers from Mingo National Wildlife Refuge assisted the Heartland Gobblers chapter of the Wild Turkey Federation, and the Missouri Department of Conservation by hosting a Becoming an Outdoors Woman (BOW) and a Junior Acquiring Knowledge, Ethics, and Sportsmanship (JAKES) clinic. Elementary students and adult women learned basic skills and events to enjoy in the great outdoors during the event. **9/98**

Mingo Refuge Web Page Goes On-Line

Mingo National Wildlife Refuge

Mingo National Wildlife Refuge now has its Web page on-line. Rod Hansen developed the page and its 56 separate files and images. Net surfers can now learn about the Refuge history, look at the Wilderness Area, review the regulations, view the bird list and many other features. Maps of the Refuge and the hunting area are available as well as volunteer opportunities. **9/98**

Refuge Staff Searches for Deer Hunters Lost on Refuge

Mingo National Wildlife Refuge

Late in the evening of January 11, 1998, Refuge Operations Specialist Terry Peacock was informed that two archery hunters were lost on the Refuge. Peacock met with family members of the lost hunters and searched the Refuge until midnight. Refuge staff and Missouri Department of Conservation Officer conducted an all-night search but were unsuccessful. A group of 12 people resumed the search at daybreak, and at noon located the spot where the two hunters had spent the night. A second

search was being organized when the two hunters exited the area and were found (about 12:30 p.m.). Both hunters were uninjured but tired. **1/98**

Primitive Weapons Deer Hunt Held at Mingo Refuge

Mingo National Wildlife Refuge

One hundred and sixteen hunters participated in the primitive weapons deer hunt on January 2-3, 1998. They harvested 40 deer. Five volunteers assisted in conducting the hunt. Missouri Department of Conservation conducted a lottery determine the participants for the hunt. **1/98**

Lower Missouri River Ecosystem

Big Muddy Manager Addresses Missouri State Legislature

Big Muddy National Fish and Wildlife Refuge

Refuge Manager J.C. Bryant was asked to provide a presentation to the Joint Subcommittee on Wetlands of the Missouri Legislature. The subject was Big Muddy and the Environmental Impact Statement under development for expansion of the Refuge. The presentation was well received and the Big Muddy video was shown. Several members complimented the video, and the subcommittee asked for an additional copy. Bryant was also asked by a "Boot Heel" Senator how they could increase funding to Mingo Job Corps. After the presentation, Bryant and Judy McClendon visited with Rep. Richardson from Poplar Bluff on Refuge and Job Corps issues. **4/98**

Refuge Survey Finds 23 Rare Eastern Massasauga Snakes

Swan Lake National Wildlife Refuge

The tallgrass prairie tract on Swan Lake National Wildlife Refuge long known to contain massasauga rattlesnakes was formally surveyed on March 28, March 29, April 2, and April 6. The survey participants, lead by Dr. Richard Seigel of Southeastern Louisiana, found a total of 23 massasauga rattlesnakes during the 73-hour effort. The snakes captured were sexed, aged, weighed, and tagged. Dr. Seigel believes that the snakes at Swan Lake Refuge are probably only the second viable, reproducing population of this species in the state of Missouri and may be an important stronghold in the recovery of this state-listed endangered species. **5/98**

Steamboat Bertrand Museum Loans Objects to Omaha Museum

DeSoto National Wildlife Refuge

The Steamboat Bertrand Museum loaned 28 objects to the Durham Western Heritage Museum in Omaha, Nebraska. Representing typical merchandise shipped to the Western frontier for resale and trade, the exhibit includes reconstructed shipping crates with stencil patterns found on the Bertrand cargo. Crates are displayed with their contents such as bitters, ale, and pepper sauce bottles. Other loaned objects include an ax head, a door lock and key, candles, percussion caps, and a variety of buttons. **3/98**

Missouri River Author Lauds Restoration Efforts During Big Muddy Refuge Tour

Columbia Fishery Resources Office

Author Dr. Daniel Botkin, toured the Refuge area and discussed Missouri River natural resource issues with Service staff during a spring visit to the Big Muddy National Wildlife and Fish Refuge. Dr. Botkin is a noted author, researcher, ecologist and President of The Center For The Study Of The Environment. He is gathering background information for a new book, "*The American Rivers Guidebook to The Travels of Lewis and Clark on The Missouri River.*" Dr. Botkin was pleased with the Service's concept of restoring portions of riverine habitat using natural processes of erosion, deposition and succession to the greatest extent possible. **4/98**

Mingo Staff Participate in Annual Earth Days

Mingo National Wildlife Refuge

Refuge staff taught environmental education topics to Butler County eighth-graders at the annual "Earth Days" activities sponsored by the U.S. Army Corps of Engineers at Wappapello Lake, Missouri. Refuge staff also taught conservation subjects to 500 Stoddard County, Mo., fifth-graders during the county's Ecology Days. **4/98**

Improvements Made to DeSoto Refuge Visitor Center

DeSoto National Wildlife Refuge

Wilderness Graphics, Inc. installed the new information desk at the entrance to DeSoto Visitor Center March 4-7, 1998. This is part of a multi-year interpretive improvement project at the Refuge. Three life-size dioramas to be installed include wetlands, woodlands, and grasslands scenes and animals. The size of the publication sales area was increased four-fold. **3/98**

Wildlife Biologist Demonstrates Banding Techniques

Swan Lake National Wildlife Refuge

Wildlife Biologist Bridget Olson demonstrated banding techniques to approximately 17 members of the Grand River Audubon Society members. She explained how to band different species of ducks and Canada geese and how banding the birds helps in tracking the flight patterns of the birds. Olson also gave a brief overview of her banding experience while on a six-week detail in Canada in the summer of 1997. **1/98**

Swan Lake National Wildlife Refuge Holds Managed Deer Hunts

Swan Lake National Wildlife Refuge

Swan Lake National Wildlife Refuge held three successful managed deer hunts in January 1998. The muzzleloading hunt for persons with disabilities was held the first weekend in January with eight participants. The hunters shot ten deer and were later fed a delicious meal by the Mendon Lions Club. The same weekend a muzzleloader any-sex deer hunt was held on the east side of the Refuge and managed by the Missouri Department of Conservation. Fifty-three deer were harvested by 73 participants. On January 17-18, 75 people participated in a muzzleloader doe hunt on the interior of the Refuge. Seventy-five deer were harvested, 55 does, 19 button bucks and one buck. **1/98**

Big Muddy Refuge Presented at Conference on Natural Resources

Big Muddy National Fish and Wildlife Refuge

A presentation on the Big Muddy National Fish and Wildlife Refuge was given at the Conference on Natural Resources of the Missouri River Basin. The meeting was attended by organizational and government representatives throughout the Basin. **3/98**

Service Programs Reach 44,000 at National Future Farmers of America Show

Squaw Creek National Wildlife Refuge

Squaw Creek Refuge staff operated an information booth at the National Agricultural Career Show of the Future Farmers of America in Kansas City, Missouri, Nov.12-14, 1998. Two staff members from Swan Lake National Wildlife Refuge also assisted. More than 44,000 attendees were exposed to Refuge and Service programs during the three-days. **11/97**

November '97 Snow Goose Migration Numbers Below Average

Squaw Creek National Wildlife Refuge

The numbers of migrating snow geese tracked at Squaw Creek Refuge in November shows a drastic reduction over past years. A peak of only 20,000 were recorded this fall. Except for the record drought of 1988, this fall's migration reflected the lowest peak since the mid-1950's. Usual peak numbers are 300,000 to 400,000. **11/97**

Volunteer Contributions Recognized at Squaw Creek

Squaw Creek National Wildlife Refuge

Fifty-one volunteers staffed the office during eight weekends this fall. Approximately 3,758 visitors entered the office and were greeted by volunteers. Volunteers continue to make significant contributions to our program. Barbara Crouser, St. Joseph, Missouri, was named as the 1997 Volunteer of the Year at a recent volunteer recognition/Christmas party. Barbara was responsible for getting the Refuge adopted by the Midland Empire Audubon Society, has been active in recruiting volunteers, and has been the only person to attend all 19 workdays held over the past 10 years. **12/97**

Annual Eagle Days Draws 3,000 Visitors to Refuge

Squaw Creek National Wildlife Refuge

Nearly 3,000 people visited the Refuge during the 19th annual Eagle Days at Squaw Creek Refuge Dec. 6-7, 1997. The two-day event is co-sponsored by the Missouri Department of Conservation. More than 5,000 people drove the auto tour route during the two days. **12/97**

Refuge Week Float Wins First Place at Holt County Fall Festival

Squaw Creek National Wildlife Refuge

As part of its National Wildlife Refuge Week activities, Squaw Creek Refuge entered a float in the Holt County (Missouri) Fall Festival

Parade. The float depicted a wetland scene and featured Refuge volunteers clad in sandwich signs that gave various facts about the Refuge and the Service's refuge system. They also passed out stickers, blue goose tatoos, bookmarks, and a listing of national wildlife refuge activities to be held at Squaw Creek. The Service message reached approximately 3,000 people and the Refuge float won first place. In other Refuge Week activities, volunteer George Scheil presented a slide show on monarch butterflies to capacity crowds; two bus tours were given to approximately 50 people, and an art contest for 150 Mound City elementary students was held. Nine awards were given for the contest including savings bonds, and other merchandise from Mound City merchants. All prizes were donated by local businesses. **10/97**

Bertrand Museum Volunteer Awarded Volunteer of the Year

DeSoto National Wildlife Refuge

The five-member Freeman family was awarded the DeSoto National Wildlife Refuge "Volunteer of the Year" honors for 1997. The Freeman's logged more than 500 volunteer hours at the Refuge, dedicated to the preservation of artifacts in the Bertrand Collection. **12/97**

Iowa's Historical Resource Development Workshop Held at DeSoto Refuge

DeSoto National Wildlife Refuge

The State Historical Society of Iowa held a one-day grant writing workshop at DeSoto National Wildlife Refuge. Staff from 15 local museum and historical societies attended the workshop, which will help institutions acquire state monies for their museum programs. **12/97**

DeSoto Refuge Hosts Best Deer, Worst Waterfowl Hunts

DeSoto National Wildlife Refuge

DeSoto National Wildlife Refuge hosted two, three-day muzzleloader deer hunts for Nebraska residents. 187 hunters logged 3,651 hours to harvest 92 white-tailed deer, the second highest number ever recorded. The Refuge also hosted its 24th consecutive waterfowl hunt. Two hundred ninety-three hunters logged 1,365 hours to harvest 29 geese and 17 ducks, the worst season ever. **11/97**

Low-Input Sustainable Farming at DeSoto National Wildlife Refuge

DeSoto National Wildlife Refuge

DeSoto National Wildlife Refuge successfully managed 2,181 acres of crop land under cooperative farming agreements with nine local farmers. Crops grown included corn, sorghum, soybeans, sweet clover, winter wheat, oats, and alfalfa. All but 121 acres were managed using low-input sustainable methods. These methods use sweet clover as the sole source of nitrogen for a following crop, limited herbicide use, no insecticide usage, and prescribed fall tillage. Cropland program public education reached 74 people, including 36 agriculturists from Russia and the Ukraine. A permanent "Farming for the Future" interpretive panel was installed at a new turnout along the auto tour. **12/97**

Squaw Creek Slide Show Hits the Big Screen

Squaw Creek National Wildlife Refuge

Movie-goers in St. Joseph, Mo., were treated to some non-Hollywood educational entertainment prior to the start of feature films, courtesy of Squaw Creek National Wildlife Refuge. Approximately 250,000 theater patrons viewed slides about Squaw Creek Refuge and National Wildlife Refuge Week from June through December 1997, before every movie in theaters (12 screens total). **12/97**

New Interpretive Panel Installed on Auto Tour Route

DeSoto National Wildlife Refuge

Refuge staff constructed a vehicle turnout and installed a new interpretive panel on the Refuge auto tour route in late October, just in time for the busy November public use season. The panel, "Farming for the Future," explains how the biological farming program works, its benefits, and other aspects of the program. The panel and turnout were located so that several crop fields could be seen behind the exhibit, thus emphasizing the crop rotation aspects of the program. This display has the potential to reach thousands of visitors, some of which may use the information to encourage similar environmentally-friendly practices on non-Refuge lands. **10/97**

Open Houses Spur Comments Regarding Expansion of Big Muddy Refuge

Big Muddy National Wildlife and Fish Refuge

Open houses relative to the Draft Environmental Impact Statement for the expansion of the Big Muddy National Fish and Wildlife Refuge were conducted November 13-19, 1997. The meetings were held in Concordia, Mo., on Nov.13 with approximately seven people attending; in Kansas City on Nov.14 with 33 attending; in St. Charles on Nov.17 with 19 attending; Columbia on November 18 with 43 attending; and Washington on Nov.9 with 50 in attendance. Strong opinions — both for and against the proposed expansion — were expressed at all meetings. There was concern from those attending both the Washington and Kansas City meetings that the project was somehow related to a plot by the United Nations to gain real property interest in the United States. Comments on the Draft Environmental Impact Statement continues until January 7, 1998. **11/97**

Mingo National Wildlife Refuge Hosts "Missouri and the Ice Age"

Mingo National Wildlife Refuge

Mingo National Wildlife Refuge and the Missouri Department of Conservation hosted "Missouri and the Ice Age," a teachers workshop concerning geological and cultural history of southeast Missouri. The workshop was a two-day, non-credit course held at the Refuge's visitor center. **11/97**

DeSoto Marks National Wildlife Refuge Week

DeSoto National Wildlife Refuge

More than 4,605 people visiting DeSoto National Wildlife Refuge during National Wildlife Refuge Week celebrations. In addition to distributing bookmarks, posters, Service brochures, and DeSoto's own "celebrate" flyer; the Refuge offered free admission from October 11-13. Several videos were shown. The Refuge also hosted a wildlife art show and sale featuring 28 artists. **10/97**

'Big Sit' Held at Swan Lake National Wildlife Refuge

Swan Lake National Wildlife Refuge

The Grand River Audubon Society held its annual "Big Sit" at Swan Lake National Wildlife Refuge on October 19, 1997. The "Big Sit" consists of drawing a 17-foot circle and seeing how many bird species can be spotted from this circle. Forty-four species were spotted along Swan Lake. Many visitors to Swan Lake also participated with the Audubon Society. **11/97**

State Representatives, Congressmen Briefed On Big Muddy Expansion Proposal

Big Muddy National Fish and Wildlife Refuge

Refuge staff briefed the Missouri Congressional delegation on the draft Environmental Impact Statement for the Big Muddy National Fish and Wildlife Refuge. Missouri state lawmakers were also briefed. Most lawmakers and staff seemed familiar with the project and appreciated the information. **10/97**

Photography Contest at Mingo National Wildlife Refuge

Mingo National Wildlife Refuge

Mingo National Wildlife Refuge hosted a photography contest to promote the public use of nature photography. One rule of the contest was that all photos must have been taken on Mingo Refuge. Some of the photos will be featured in the updated Mingo National Wildlife Refuge general information brochure that is currently being developed. **10/97**

Bird Feeders Donated to Refuge Following Woodworking Contest at Mingo

Mingo National Wildlife Refuge

Area woodworkers entered homemade bird feeders in a contest hosted by Mingo National Wildlife Refuge. Participants were told that feeders donated to the Refuge would be used in the newly remodeled songbird feeding area. This was a good opportunity to promote songbird conservation while the Refuge acquired many unique hand-carved feeders. All but one participant chose to donate their feeder to the Refuge. **10/97**

High School Poster Contest Hosted by Mingo Refuge

Mingo National Wildlife Refuge

Mingo National Wildlife Refuge hosted a poster contest for area junior and senior high school art students. The contest's theme was "Our National Wildlife Refuge System." Art students developed their posters from the Mission Statement of the National Wildlife Refuges. Each participant received a National Wildlife Refuge Week poster and the winning entries were displayed during the Refuge open house. **10/97**

Society for Rangeland Conservation Tours DeSoto Refuge

DeSoto National Wildlife Refuge

Members from the Society for Rangeland Conservation toured the visitor center museum and Refuge. Refuge staff discussed the Refuge's sustainable agriculture program, grassland program, wildlife programs, wetland management, controlling invasive plant pests, how the Missouri River Valley hydrology has changed and environmental effects, and different types of research conducted at the Refuge. **10/97**

Mingo Volunteers Team With Girl Scouts

Mingo National Wildlife Refuge

Volunteers and staff at Mingo National Wildlife Refuge are assisting local Girl Scouts by providing facilities, coloring books, and photocopying for Scout activities. Refuge Volunteer Christine Hansen and Terry Peacock, assistant manager, also serve as Girl Scout Troop Leaders. In exchange, Girl Scout Troops are taught environmental education and ecological principals as they relate to life in southeastern Missouri. **10/97**

Mingo National Wildlife Refuge Participates in "Industrial Day"

Mingo National Wildlife Refuge

Mingo National Wildlife Refuge took part in the annual "Southeast Missouri (SEMO) Industrial Day," a special event that brings SEMO businesses and government entities together with local elected officials to promote and attract business to southeast Missouri. A display area was constructed and information made available to the public. Mingo National Wildlife Refuge was a main attraction to the event because of its 120,000-160,000 a year visitation. **10/97**

Mingo Refuge Featured on Radio Talk Show

Mingo National Wildlife Refuge

Rod Hansen, assistant manager at Mingo National Wildlife Refuge, was the featured guest on "Good Morning Poplar Bluff," a 30-minute talk show from a Poplar Bluff radio station. Topics discussed were the National Wildlife Refuge System, National Wildlife Refuge Week activities at Mingo, and the history and management of Mingo National Wildlife Refuge. **10/97**

"Make a Wish Foundation" Dream Realized at Mingo

Mingo National Wildlife Refuge

Mingo National Wildlife Refuge assisted the Make a Wish Foundation's efforts to help a terminally ill youth realize his dream of going on a deer hunt. A special permit was issued to the youth to enter an area of the Refuge normally closed to archery hunting. Cabela's, Inc. furnished the youth with hunting clothing and a bow. Although a deer was not harvested, the boy enjoyed the opportunity and was very thankful for getting his wish granted. **10/97**

National Wildlife Refuge Week Open House

Mingo National Wildlife Refuge

Mingo National Wildlife Refuge celebrated National Wildlife Refuge Week with an open house on Saturday, October 18. Several speakers presented different topics throughout the day. Subjects included the national wildlife refuge system, wildlife law enforcement, a tree identification hike, wildlife rehabilitation programs and the art of nature photography." Also on display were the winners of the poster contest, a bird feeder competition, and photography contest. **10/97**

'Owls and Howls' Night Hike

Mingo National Wildlife Refuge

Mingo National Wildlife Refuge held an "Owls & Howls" tour, a night hike on the Boardwalk Nature Trail on the Refuge. Refuge staff began the program with a "Wings Over Mingo" discussion, followed by the night hike. **10/97**

Swan Lake National Wildlife Refuge has Conservation Day for Area School

Swan Lake National Wildlife Refuge

Approximately 60 grade school children attended the Conservation Day at Swan Lake National Wildlife Refuge during National Wildlife Refuge Week. Wildlife Biologist Bridget Olson coordinated the event. The children from Tina-Avalon and Northwestern School Districts were given a brief overview of the Refuge at the Refuge visitor center, visited the observation tower, and made stops on the Refuge to learn about prairie grasses, waterfowl identification, and Refuge management. **10/97**

Chariton Co. Heritage Tours Visits Swan Lake National Wildlife Refuge

Swan Lake National Wildlife Refuge

The Chariton County Heritage Tour Committee has arranged for tours to be given in Chariton County and the surrounding area. The first tour, which included approximately 40 tour guides from North Missouri, stopped at Swan Lake National Wildlife Refuge. Wildlife Biologist Bridget Olson explained the management of the Refuge and briefed them about visiting waterfowl. The tour committee hopes that this initial tour generates many more tours through Chariton County, Swan Lake National Wildlife Refuge, and the surrounding communities. **10/97**

Region Briefs Lawmakers on Big Muddy Refuge, Environmental Impact Statement

Big Muddy National Wildlife and Fish Refuge

Service representatives from Region 3, Big Muddy Refuge and Columbia Field Office visited Washington October 16 to brief Senate and Congressional staffs on Big Muddy National Wildlife and Fish Refuge and the upcoming Draft Environmental Statement. The Service Directorate was also briefed. The draft Environmental Impact Statement will be available to the public in November, with open houses scheduled Nov. 13-19 at Concordia, Kansas City, St. Charles, Columbia and Washington in Missouri. **10/97**

Columbia Office Monitoring Fish at Big Muddy Refuge

Columbia Fishery Resources Office

Columbia Fishery Resource Office conducted fish sampling in the waters of the Lisbon Bottoms Unit of the Big Muddy National Wildlife and Fish Refuge from May 18 - 22, 1998. Lower Missouri River Ecosystem Partners from Missouri Department of Conservation and U.S. Geological Survey, assisted in fish and invertebrate sampling. Routine surveys are conducted to determine use of the unique self-restored river chute by interjurisdictional and candidate fish species. Routine surveying allows us to monitor changes in the fish community over time. This information assists the Refuge in negotiations with the U.S. Army Corps of Engineers regarding chute modifications. **5/98**

Swan Lake Hosts Fishing Clinic

Swan Lake National Wildlife Refuge

In conjunction with National Fishing Week, Swan Lake National Wildlife Refuge hosted a fishing clinic on June 2, 1998. Twenty-two local school children participated in activity stations such as knot-tying, casting, fish cleaning, and a presentation on fish sampling. The rest of the afternoon the children practiced their fishing skills by fishing Silver Lake. Prizes were awarded. Though no fish were caught, each child went home with an activity packet complete with T-shirt. **6/98**

DeSoto Sponsors Fishing Clinic for Inner-City Youth

DeSoto National Wildlife Refuge

On June 6, 1998, DeSoto National Wildlife Refuge and the Nebraska State Layman's Association sponsored a fishing clinic in conjunction with National Fishing Week. Forty five inner-city youths and 12 adults participated. Instruction was provided for casting, identification, knot tying, and safety. Fishing opportunities were provided on DeSoto Lake with a barbecue afterwards. Many of the young people have little or no opportunity to experience these types of activities. **6/98**

Service Wetland Conservation Award Presented to Iowa School for the Deaf

DeSoto National Wildlife Refuge

Nita Fuller, assistant regional director for Refuges and Wildlife, presented the Service's National Wetlands Conservation Award to the Iowa School for the Deaf in Council Bluffs,

Iowa. The June ceremony was held in conjunction with the dedication of the Nature Center complex and wetland demonstration site. **6/98**

Bible Campers Tour Swan Lake National Wildlife Refuge

Swan Lake National Wildlife Refuge

About 50 elementary school students visited Swan Lake National Wildlife Refuge June 29, 1998, as part of Immaculate Conception Catholic Church Bible Camp field trip. The Brookfield, Mo, group listened to a presentation by Refuge staff on management activities and migratory birds of Swan Lake National Wildlife Refuge. The children then climbed the observation tower. **7/98**

DeSoto's Steamboat Featured in Online Archeology Magazine

Desoto National Wildlife Refuge

Archaeology Magazine Online Features, an electronic supplement of original material to the print magazine, posted a feature article highlighting DeSoto's Steamboat *Bertrand*. Kenneth W. Karsmizki's article, "Steam Machines," describes the *Bertrand* and includes multiple images of the boat's cargo. Also included is an Internet link to the Steamboat *Bertrand*'s home page address. The magazine's web master said the article will be available online indefinitely. Read about the *Bertrand* and other Civil War-era steamboats at: **7/98**

South Carolina Public Television Highlights DeSoto NWR

DeSoto National Wildlife Refuge

Television Nauralist Rudy Manke, and a television crew from South Carolina Educational Television spent five days on the Refuge August 22-26, 1998, filming for a 25-minute wildlife video. Manke's interpretive films of national wildlife Refuges have been shown nationwide over the past 20 years. DeSoto will have a good product that will be shown starting in December. Rudy's show has been carried by public TV for 20 years, so he has a lot of experience interpreting national wildlife Refuges to the public. **8/98**

Exhibits Renewed at DeSoto's Visitor Center

DeSoto National Wildlife Refuge

Wilderness Graphics, Inc. of Tallahassee, Fla., installed new exhibits at the DeSoto Refuge visitor center August 12-28, 1998. The installation is part of a multi-year plan to renew exhibits, and stress the present mission of the Service. Highlights of the remodeling include: life size dioramas of the woodlands, grasslands and wetlands of the Missouri River Valley, repositioning the steamboat exhibits, relocating the information desk and expanding the sales area five-fold. **8/98**

Grassland Restorations Completed for 1998

DeSoto National Wildlife Refuge

DeSoto staff reverted 126.2 acres of former cropland at DeSoto and Boyer Chute National Wildlife Refuges to native grassland species. A mixture of native warm-season (100.2 acres) and cool-season (26.0 acres) grasses were planted. This was a little more than half of the planned acres. Wet weather prevented timely seedbed preparation and planting on 95 acres. Current plans are to dormant seed these acres this fall. **9/98**

DeSoto's Eight-Year Deer Research Project Ends With Published Thesis

DeSoto National Wildlife Refuge

DeSoto National Wildlife Refuge's white-tail deer research project was terminated after eight years with the publishing of Kurt VerCauteren's Doctoral thesis, "Dispersal, Home Range Fidelity and Vulnerability of White-Tailed Deer in the Missouri River Valley." This study aided the Refuge in future management decisions. **9/98**

*...assuring the
perpetuation of
wildlife populations
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- Refuges and Wildlife
Mission*